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OVERSIGHT HEARING ON JANUARY 4 AMTRAK-CONRAIL ACCIDENT

HEARING

BEFORE A

SUBCOMMITTEE OF THE
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

FIRST SESSION

SPECIAL HEARING

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OVERSIGHT HEARING ON JANUARY 4 AMTRAK–CONRAIL ACCIDENT

TUESDAY, JANUARY 20, 1986

U.S. Senate,
Subcommittee of Transportation and Related Agencies,
Committee on Appropriations,
Washington, DC.

The subcommittee met at 10:10 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Frank R. Lautenberg (chairman) presiding.

Present: Senators Lautenberg, Kasten, D'Amato, Stennis, Chiles, Weicker, and Mikulski.

CONGRESSIONAL WITNESSES

OPENING REMARKS

Senator Lautenberg. The Subcommittee on Transportation of the Appropriations Committee is called to order.

We will be having some opening statements, and then we will call on our distinguished colleague, Senator Pell, from Rhode Island.

Early Sunday morning on January 4, Amtrak's "Colonial" train No. 94 rammed into the rear of three Conrail locomotives near Chase, Md.

Sixteen lives were lost. Early estimates put the damage at over $15 million. The Colonial was carrying 500 passengers and a crew of nine. Just before the collision it was traveling at an estimated 128 miles per hour.

While 16 lives were lost, the toll could have been much higher. Luckily, the cafe car just behind the locomotive was empty, reserved for riders at later stops. That car was crushed like a beer can.

I was at the crash site early on Monday following the accident. Words can't convey the horror. I hadn't seen that kind of destruction since I served in Europe in World War II.

As I walked along the shattered burned out remnants of the Colonial and the Conrail engines, my mind kept coming back to one basic question. Was this an accident waiting to happen?

The hearing today will focus on that question, and the other questions that follow.

Was this an accident waiting to happen because freight is mixed with passenger traffic on a congested high-speed corridor, because our rules aren't tight enough, because management and workers and government aren't vigilant enough?

What's gone wrong in rail safety? What will it take to make it right?

We have a federal rail safety program. Is it missing the mark? Where is it missing the mark? Can it be improved?

How do we limit the possibility of a human error? How do we make certain we don't have drugs and alcohol involved?

When there is human error, what kind of technology can we use to compensate?

And this subcommittee, in particular, has to ask, are we spending our rail safety dollars well?

APPROPRIATIONS

For the past several years Congress has appropriated roughly $27 million for the Federal Railroad Administration's safety inspection and enforcement program. In addition, over $9 million a year is provided for rail safety research and development.

The President's budget requests no increase. We need to ask: Is the current inspection force adequate? Is it properly deployed?

Is rail safety enforcement given the priority it deserves?

Since 1977 the federal government has invested over $2.3 billion to make the Northeast corridor a world-class high-speed passenger route. But the goal was not just to make the corridor fast, but to make it safe. The accident of January 4 raises doubts about whether or not we have achieved that goal.

Today we are going to hear from a number of witnesses including representatives of the federal government, the railroads, their workers, their passengers and the safety board investigating the accident.

Some of the recommendations we will here may lie outside the jurisdiction of this subcommittee and some may require statutory changes that fall within the purview of legislative committees.

LICENSING

But the Congress as a whole must move on all fronts to tighten up safety requirements. There is one change that I think is overdue. We need federal licenses for railroad engineers.

Today no license of any sort is required. They don't even need a driver's license. A busdriver needs a driver's license, a truckdriver needs a driver's license, an airline pilot needs a pilot's license. But a railroad engineer needs nothing of the sort, and that's got to change.

We need a federal standard on the qualifications and skills of engineers. The argument that the public licenses have no place on private railroads is a losing argument.

It's no private matter to drive a railroad engine at up to 125 miles an hour pulling tons of metal and hundreds of passengers or cargo, maybe toxic cargo.

DRUG/ALCOHOL TESTING

I want to add a word about drug use. We heard that the Conrail engineer tested positive for drug use. Of course, the question is, was he impaired as a result of that, and we don't know yet.

But we do know that the seat of a locomotive is no place for drugs and no place for those who use them. It has to stop.

Drug testing must be used. There should be better oversight and stiff penalties.

But the fact is, no amount of testing will stop all drug abuse and it definitely won't stop human error. A person can run a light because he's high or because he's tired, he's under stress or because his heart just failed. We have to reduce the chances for error and then compensate with technology if it happens.

Travel on the corridor is not going to stop. Amtrak carries about 17,000 passengers daily among and between stations from New York to Washington. Often during bad weather, Amtrak is the only way to travel.

Under federal legislation Conrail has the right to use the corridor. For many shippers and towns Conrail may be the only carrier that can handle their needs.

In my home state of New Jersey, Amtrak runs a total of 44 trains carrying close to 2 million passengers annually. In addition the state is served by long-distance trains like the Colonial.

The federal government's relationship with Amtrak and Conrail is unique. It presently owns and supports Amtrak. It owns 85 percent of Conrail.

We must make sure that these and all railroads are safe. The Colonial accident shattered the peace of Chase, Md., and shook our confidence that we have done all we can to safeguard the rail-going public. We need to restore that confidence.

That's what we intend to do through these hearings.

I want to welcome the ranking member of the subcommittee, my distinguished colleague, Senator D'Amato. And I do want to acknowledge the presence of Senator Stennis, a distinguished member of this subcommittee and chairman of the Appropriations Committee. We thank him for joining us today.

I would now call on Mr. D'Amato to see if he has any opening statement.

Senator D'AMATO. Mr. Chairman, first let me commend you for scheduling this oversight hearing to look into the tragic Amtrak accident of January 4.

It's worth noting, Mr. Chairman, that this subcommittee, comprised as it is of members who are so keenly concerned as you about Amtrak and transportation and the Northeast corridor, provides appropriations each year to Amtrak for its operations and capital improvements, to FRA for safety and research and to the safety board charged with responsibilities for an accident investigation, as well as for ongoing safety recommendations.

We understand that the investigation is ongoing, and we will not attempt to assess fault today for this accident. There are, however, many lessons that we can learn from this event. They are lessons as specific as the excessive speed of both trains on that fateful day and as broad as the problems of drug abuse in the segment of the population charged with the safety of the traveling public.

The subcommittee will look beyond this particular accident to operating practices in the Northeast corridor.

I think we have to look at states such as New York where freight and passenger services are also intermixed. I have heard you, Mr. Chairman, raise that as something we have to examine, and I applaud you for it.

ALCOHOL/DRUG TESTING

We also need to examine closely whether there is enough being done to eliminate drugs in the transportation workplace. I make my own observation that I do not believe that we have adequate programs dealing with that most important area. The American public has a right today to expect that industry and labor will provide for a transportation system unimpaired by alcohol and drugs.

I am aware of the difficulty of finding a fair and responsible method of bringing this about. Employees of airlines, railroads and highway transportation firms must know that their place is not behind the wheel or throttle, but in counseling, if they have a problem with alcohol or drugs. Compassion as well as responsibility must be utilized as industry, labor and the federal government wrestle with this most pressing safety question.

Today we will have an opportunity to hear from the experts. Let me say, Mr. Chairman, I look forward to reviewing the recommendations that they make and working with you and members of the subcommittee to find appropriate solutions.

I also find it good to see that our chairman, Senator Stennis, is here with us today. Certainly, we look forward to the chairman's support because some of these recommendations will obviously cost money, and that is a never-ending battle. The question remains: How do we make the proper allocations of the limited funds that we do have available?

So, Mr. Chairman, let me commend you for calling these timely hearings.

Senator LAUTENBERG. Thank you, Senator D'Amato.

Senator Stennis, do you have an opening statement?

Senator STENNIS. Mr. Chairman, I thank you.

I am here as a member of your valued subcommittee. I am interested in the subject matter of this hearing, and I see that it's not going to be easy to find a full solution, but it ought to be fairly easy to get the facts.

And that is what you are pursuing right now and I certainly wish you well.

I will have a continuing interest in the hearings and attend as I can.

Senator LAUTENBERG. Thank you, Senator Stennis.

Senator Mikulski, do you have an opening statement?

Senator MIKULSKI. Just very briefly, Mr. Chairman. As a member of the full Appropriations Committee I am delighted that you allowed me to participate in this hearing and as one of the members of the Senate from the Northeast corridor I want to congratulate you on taking the initiative in holding this hearing.

CHASE, MARYLAND

As we all know, this tragic accident occurred in the State of Maryland in a small community called Chase, Md. So those of us from Maryland have a great deal of interest in this issue.

We are very proud of the people of Chase, Md., and the way they responded to deal with the emergency medical situation caused by the Amtrak crash. We feel that because of our emergency medical system and the spirit of volunteerism and good neighborliness of the people of Chase, we minimized both fatalities and casualties.

But we feel we owe it to those families to make sure that we identify the safety issues that caused this accident so that it would never happen again.

As the chairman has pointed out, the purpose of this hearing is not to find individual fault, but to look at the concerns for safety. I am particularly interested in issues like the use of track for both freight and passenger traffic. Are they compatible? Do we need to change that, or do we need better coordination? Or do we need to take a look at the very kind of railroad vehicles that we have and perhaps examine the need for automatic slowdown mechanisms?

The other is the issue of warning systems. Are they effective, can they be seen, can they be utilized, are they tamperproof?

Of course, the other factor is human error—what kind of mechanisms exist within our railroad vehicles to assure alertness for the good guys. Also what kind of management systems do we have in place to protect us from possible substance abusers.

Mr. Chairman, those are some of the issues I will be looking at—to find concrete issues and sensible answers to these problems. Thank you.

Senator LAUTENBERG. We welcome your participation and invite you any time you would like to join us, Senator Mikulski.

We are privileged this morning to have with us the distinguished colleague from Rhode Island, Senator Pell, who has a statement to make.

Senator Pell, we invite you to do so at this time.

STATEMENT OF HON. CLAIBORNE PELL, U.S. SENATOR FROM RHODE ISLAND

Senator PELL. Thank you, very much, Mr. Chairman. And thank you for permitting me to appear before you at this time.

I want to congratulate you and members of the subcommittee and full committee for conducting this hearing which is so timely.

Also, I think that John Riley of the Federal Railroad Administration, and Joe Walsh, Administrator for Safety, have done an excellent job and should be commended, too.

As you approach this problem it seems we have to bear in mind the paramount importance of improving, not only preserving but improving the high-speed railroad, the corridor.

I can remember about 20 years ago writing a book that is absolutely current today because so little has been done. The book was called "Super City and Transportation of Tomorrow."

The reason for this is that the number of potential "megalopolises" across the country are expanding, as the map shows. In the Northeast corridor between Washington and Boston we have the largest "megalopolis."

But there are other developing ones in other parts of the country: California, Texas, Florida, Chicago, et cetera.

In fact, in getting the original study going, President Johnson calculated that one-fifth of the electoral votes of the country existed in the Northeast corridor and that fact played a strong role in Johnson's support of the Northeast corridor.

One way to visualize the Northeast corridor, too, I think, is when you look down from an airplane and you realize the corridor is one long city. The lights may be a little brighter in one place than another, but really it's one long city.

As you look at it that way you realize it should be thought of in those terms and rail passenger service should be thought of in terms like a subway, perhaps, where the service is frequent, where we would have, for example, every 10 minutes a train from Philadelphia to New York, every 20 minutes a train from Washington to Boston, et cetera.

This kind of service with new kinds of equipment, with new safety devices, with tickets collected prior to getting on like you would in the subway would, I believe, give our people in this part of the country the rail service that they need, and it would be a model for other parts of the country as well.

Obviously in that service safety is the most, probably the most important single characteristic. In that regard, I would ask your consent, Mr. Chairman, we insert in the record a copy of a letter I wrote you with some specific recommendations in this record.

Senator LAUTENBERG. It shall be done.

[The letter follows:]

LETTER FROM SENATOR PELL

JANUARY 15, 1987.

Hon. FRANK LAUTENBERG,
Chairman, Senate Appropriations Subcommittee on Transportation,
U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: I am writing to urge your Committee to promptly consider two initiatives in response to the tragic Amtrak accident which occurred on January 4. This accident, in which two of my constituents were among the 16 fatalities, has heightened the need for increased emphasis on safety measures in the Northeast corridor.

The recent accident underscores the need to expedite the removal of all freight service from the corridor. Efforts underway over the past decade have already brought about the diversion of a considerable amount of freight traffic, largely because passenger trains have dispatching priority and cause freight trains to experience delays.

The Department of Transportation's recently released study entitled, "Northeast Corridor: Achievement and Potential," reports that while freight traffic on the corridor north of Philadelphia has declined significantly in the last 10 years, it has persisted at a high level south of that city. In fact, according to the DOT study, freight traffic between Baltimore and Perryville, Md., has actually increased in recent years. The DOT study goes on to say that "while the corridor indeed contains many features * * * to avoid catastrophic freight derailments * * * yet the potential remains for freight-related safety problems."

The fact is that while Amtrak has total control over the maintenance and safety of its own equipment, it cannot control the scores of freight operators (and their employees) currently using the corridor.

The Federal Railroad Administration has not examined the feasibility of separating freight and passenger service in the corridor for over 5 years. I have a particular concern in this area because of the absence of automatic train stop signals north of New York, a safety feature that was deleted from the Northeast Corridor Project for budgetary reasons.

The January 4 accident suggests that the time has come for the Northeast corridor to shed freight tonnage once and for all. I urge you, in your capacity as chairman of the Appropriations Transportation Subcommittee, to authorize additional funding and/or reprogramming authority in fiscal year 1987 for an FRA study of the separation of freight from passenger service in the Northeast corridor. The authorization should, in my view, direct the FRA to submit recommendations to Congress on freight diversion in the corridor no later than January 1, 1988.

My second suggestion is that your committee immediately take steps to restore the State Safety Inspector Program to full funding. This program is currently funded at a level of $1.35 million in fiscal year 1987, representing a decrease from the $2.2 million appropriated for state safety inspectors in fiscal year 1986. I understand that the administration has proposed a deferral of all fiscal year 1987 funding, an action I find inconceivable in light of last week's accident.

The State Safety Inspector Program was established 12 years ago to fund half of the cost of state track inspectors. The administration has sought to eliminate this program in recent years, but Congress has provided funding sufficient to support about 25 percent of the cost of state inspectors, who represent one-quarter of the total number of the rail safety inspectors in the country today. Many states, including my own State of Rhode Island, have been forced to drop out of the program entirely because of the decreased federal funding. If the remaining fiscal year 1987 funding is deferred, the Safety Inspector Program may cease entirely.

Instead of a deferral of the ramaining funding, I urge your committee to provide the full $3.5 million level, which is necessary to fund 50 percent of the State Rail Safety Inspector Program.

I commend your committe for holding hearings on the safety record of our nation's passenger railroad. You have been a strong and effective advocate for Amtrak, and I know you share my view of the paramount importance of rail passenger service in a balanced national transportation system.

I believe the two measures I have advocated will greatly enhance the safety and reliability of Amtrak, and help to pave the way for future capital improvements in Amtrak's most heavily traveled and revenue generating resource, the Northeast corridor.

Warm regards.

Ever sincerely,

CLAIBORNE PELL.

IMPORTANT SAFETY FACTORS

Senator PELL. One of the most important safety factors in my mind would be that there should be high-speed track dedicated exclusively to passengers. That freight not be permitted on the high-speed lanes of the Northeast corridor at all.

We have some sections of track where this is the case now, but as we sadly know, not enough.

Another very important program which I am sure you will be focusing on is this question of the state safety inspectors, which is a program that, rather than being diminished as the administration has recommended, that it should be enlarged and expanded, and states should be helpful and encouraging in this regard.

I would hope those would be two points on which your committee might focus in the greatest amount.

Finally, if the safety problems are resolved, there would seem to me no question but that as we look into the future the high-speed railroads in the densely populated corridors across our nation will be carrying an increasing load of our people.

My own thought has always been that buses and cars are fine for up to say 50 miles. From 50 to 300 or 400 miles the primary means of transportation should be the high-speed railroads, and from then on out should probably be airplanes.

I wish you well and good luck with your inquiry in this area. Thank you.

Senator LAUTENBERG. Thank you, very much, Senator Pell. I know of your long-term interest in transportation.

We in our business need efficient transportation otherwise we can't function. Your reminder that one-fifth of the electorate——

Senator PELL. That is just our own corridor, not counting all the other corridors around.

Senator LAUTENBERG. That's correct. So we take your recommendations seriously.

We will be examining the question of whether or not freight and rail passenger service should be operating on the same line.

There are many questions that relate to that, including costs of freight service in a state like mine.

But we will certainly, Senator Pell, be examining all these questions. And we will take any testimony that you wish to submit—any information you think is of value.

Please submit it to us and we will include it in the record. And we thank you for appearing with us this morning.

Senator PELL. Thank you very much. Thank you for the hospitality of the subcommittee.

Senator LAUTENBERG. Are there any questions of the Senator?

Thank you, very much.

Now, we would like to hear from our first witnesses, the Administrator of the Federal Railroad Administration, Mr. John Riley.

DEPARTMENT OF TRANSPORTATION

FEDERAL RAILROAD ADMINISTRATION

STATEMENT OF JOHN H. RILEY, ADMINISTRATOR

ACCOMPANIED BY:
JOSEPH W. WALSH, ASSOCIATE ADMINISTRATOR
GRADY C. COTHEN, JR., SPECIAL ASSISTANT TO THE CHIEF COUNSEL
MARK LINDSEY, ACTING CHIEF COUNSEL

INTRODUCTION OF ASSOCIATES

Mr. RILEY. Good morning, Senator.

I have three people joining me this morning. I would like to introduce them.

On my left is Joe Walsh, Associate Administrator for Safety. We hired Joe from the Signalmen's Union. On my right is Mark Lindsey, acting Chief Counsel at FRA, a longtime FRA employee. And on his right is Grady Cothen, an attorney at FRA. But he is much more than that. Grady is the expert on alcohol and drugs within our agency, both in its legal status and technical status. I brought him here today because I know that is an issue of concern to the committee. And anything I can't tell you, I am sure that he can.

Senator LAUTENBERG. Thank you, Mr. Riley. In the interest of time we have your full statement. That will be of course included in the record, and I would ask you if you can to summarize your statement.

Mr. RILEY. Thank you, Senator.

I was also at the scene of the accident on January 4, and I had exactly the same reaction as you did.

ACCIDENT DESCRIPTION

As the first witness this morning I will try to recreate the scene of the accident. On my left are three charts which will help you.

On the afternoon of January 4, the Amtrak train and Conrail train were northbound toward an intersection known as Gunpow Interlocking.

The Amtrak train, which is illustrated on the first chart, had right-of-way to proceed through the intersection at up to 105 miles an hour.

The Conrail train was to stop at the final signal and allow the Amtrak to pass. The Conrail locomotive had the benefit of three different signal devices designed to warn the crew when it has to slow and stop.

The first, the wayside signal, is the basic stop-and-go mechanism of the railroad industry. The second, cab signal, is a duplicate of that signal inside the locomotive cab itself.

The third device, an alerting whistle, is designed to ensure the crew is attentive. The alerting whistle sounds whenever the cab signal tells the crew to slow or to stop. It continues to sound until the engineer responds.

The whistle and cab signal must be tested by the train crew before they leave their terminal for the run. The engineer in this case confirms that he performed the test and found them both to be working properly.

The chart on the extreme right, Phil, perhaps you can help us with this, will show you what happened at the scene of the accident. That is an exact replication of the event recorder tape taken out of the first Conrail locomotive.

The black line is the Conrail locomotive. As you can see, the Conrail locomotive entered the interlocking at about 60 miles an hour. At 11,793 feet from the intersection, the wayside signal, the first wayside signal, became visible. The engineer says it told him to slow to 40. We believe it told him to slow to 30.

But that is somewhat of an academic dispute because, as the chart demonstrates, the engineer kept up a fairly even 60 miles an hour past the signal.

Here the cab signal and whistle should have been sounded as well. The train was able to see the second signal, the home signal, which all parties agree ordered the locomotive to stop.

Again at this point the train proceeded through the sight point at an even 60 miles per hour. A thousand feet beyond that, about 4,600 feet from the impact point, we hit what is called the code change point.

At the code change point the engineer should have received his fifth and sixth warnings of the need to slow and stop from the cab signal and alerting whistle.

At this point the train began to accelerate rather than decelerate and continued to accelerate until the crew clearly perceived danger and threw the train into emergency braking.

You can see the train came to a fairly rapid stop, skidded a little bit and the point of impact occurred 6 seconds after the Conrail train had moved out onto the main track.

In looking at that chart it's worthwhile noting the stopping distance for this train under normal circumstances is about 2,800 feet.

You can see that in emergency braking it stops much more quickly. The point is that, had the train heeded any of those six signals, it would have stopped short of the intersection.

Now, what happened? Post-accident testing disclosed the following: First, the wayside signal was subjected to 5 days of the most intense testing we know how to muster. It passed all the tests.

There is nothing in our investigation to draw into question the event recorder which tells us the wayside signal worked as designed at the time of the accident.

But there is a different story with the alerting whistle. The alerting whistle definitely did not work.

ALERTING WHISTLE

The alerting whistle we found to be tampered with and intentionally disabled. Tape, duct tape, was placed across the air nozzle of the alerting whistle so that the whistle could not sound.

It's clear from that chart that when the crew perceived itself to be in danger it did, in fact, stop the train.

I am extremely concerned about this tampering, because the tampering with this whistle prevented the crew from getting a clear whistle sounding of danger at two points which would have given it adequate time to stop before the signal.

Finally, the cab signal. Some interesting findings on the cab signal. The engineer told us, and we have no reason to question him, that he did perform the required predeparture testing and found all lights in the cab signal to be lighting.

An hour and 15 minutes later at the point of the accident we found one of the bulbs missing. Not burned out, but missing.

I won't conjecture how you can reconcile those points, but I would simply make the point that all other aspects were properly working.

And even had the bulb been missing at the time of the accident, the engineer still would have received his slow-to-stop warning 4,000 to 4,500 feet from the accident.

The fact pattern of the accident falls into one that is all too common. The hardware that we install, the things we inspect with our inspectors, the track, the braking system, the signals, appears to have worked properly in this accident to the extent it was not tampered with. Yet, we had a serious accident.

We had at least three operating signals that were run through, we have a tampered-with safety device and we have positive toxicological tests. Again, the focus is on human factors.

ACCIDENT RATES

The last 5 years in the railroad industry have been a period of enormous, in fact, historic improvement in safety performance.

That chart tracks the performance of the industry and these two railroads in relation to the rest of the industry.

The accident rate in the railroad industry has been cut in half over this decade. The last 3 years are the safest in its history, and 1985 is the safest single year in the history of the railroad industry.

Our preliminary figures from 1986 tell us 1986 bettered 1985 by about 20 percent. A lot of factors went into that improvement. Unquestionably, improved cash flow from deregulation; unquestionably, a tougher enforcement program from the Federal Railroad Administration and other important factors.

But apart from that, accident investigation has made a big difference. We have poured through the accidents, isolated the key issues that come out of them, addressed them by regulation where we must, voluntary programs where we can.

I think there are two major issues, and I share the chairman's opinion. The first is certainly tampering. Tampering in this incident is not isolated. We found six more trains in the course of the succeeding weeks with which whistles were tampered exactly the same way. Four more were found last weekend.

We have numerous reports of deadman's controls being eliminated.

We have only the legislative authority to regulate railroad companies. Labor has successfully over the years prevented us from getting the authority to regulate and take sanctions against individual employees.

However, even with that disability, we will work with the supply industry to see what can be done to make these devices more tamperproof.

In fact, we are going to call on the leaders of organized labor to work with us in creating an environment in the workplace that simply will not tolerate that type of conduct.

The second issue has been raised by the chairman and I agree with it. We need to reopen the question of whether automatic train control receivers should be required of trains operating with Amtrak on the Northeast corridor.

NTSB RECOMMENDATIONS

It's not a new issue; it was considered by NTSB and FRA in the late 1970's and early 1980's and ultimately resolved in the same way.

In 1978 NTSB recommended it and FRA moved to require it. But after receiving comments from the constituents, NTSB closed its recommendations and concluded Amtrak's operating practices were an acceptable alternative. I think we need to reopen this.

In defense of our predecessors, let me say this. When this issue was considered in 1983 every single constituent opposed it, Conrail, SEPTA and organized labor.

But I think all of us ought to have an opportunity to reconsider that issue. It is an important safety mark.

It's not a panacea. Contrary to popular belief, automatic train control does not necessarily stop a train. If the engineer responds at all it slows the train to 20 miles an hour and it can still go through the signal at 20.

Nor does it operate if there is any signal malfunction, because it's triggered by the signal. Finally, it has to be the easiest device there is to tamper with or disable.

However, it provides a safety margin and I think we need to proceed. We ordered our staff to proceed last week, and I was pleased to see NTSB take the same position last week.

Finally, and I will defer to questions for reasons of time, one thing that came from the accident was an opportunity to evaluate the numerous retrofits we have made in passenger cars over the last 7 or 8 years to try to make them more crashworthy.

After the accident was over, our inspectors—Phil, you might put all three up—our inspectors walked through the train and photographed the train interiors. We looked at what happened to every seat and every window.

Over the past 7 or 8 years through a series of voluntary agreements with Amtrak we have retrofitted the cars to include crash posts, retrofitted locking devices we felt failed in the past and allowed seats to spin loose from the floor, designed new luggage restraint systems and come up with a new locking device for microwave ovens.

Those charts tell you what happened. As to the seats, we have made progress clearly. Of the 690 surviving seats behind the locomotives, only nine broke loose from their moorings, an enormous change from past experience. So the retrofit on the seats did work.

However, we discovered that now that we keep the seats in place we have a new issue. Cushions separated from 60 percent of the seats. And while they are not heavy metal, they clog the aisles and make rescue difficult.

Now that we seem to have surmounted the seat problem, we have to see what can be done with the seat cushions. As with the microwave oven, though we are not aware that anyone has been hit by one, they are clearly a danger and move out of their casings in times of accident.

We have come up with a retrofit that will keep them in place. Unfortunately, while most of the trains had been retrofitted, this particular cafe car had not. So it gives us no lesson on that.

Finally, luggage. Two years ago after we completed our own rulemaking on passenger restraints and passenger equipment after we acquired jurisdiction over the issue, we looked at the use of airplane luggage compartments in trains.

We concluded for a number of reasons that I will be glad to go into that that did not work in a railroad environment, and we began with Amtrak to each develop independent systems adapted to trains.

Amtrak has completed developing a prototype testing car for their system that will go into service in February.

Some of the things we learned here will help us to evaluate those improvements.

Let me simply conclude by saying in the early sixties railroad accidents of this nature regularly took 80 to 90 to 100 lives. The fact that more than, of almost 600 people on this train, 585 survived and more than 400 walked away without injury shows that a lot of progress has been made.

But it shows that a lot of progress is yet to be made. It's exactly this kind of accident and the lessons to learn from it that make the difference.

And we appreciate the committee's interest

[The statement follows:]

Statement of John H. Riley

Mr. Chairman. This is not a difficult accident to reconstruct. At approximately 1:30 p.m., Sunday, January 4, 1987, Amtrak's Colonial and a three engine Conrail train were moving northbound toward Gunpow Interlocking on parallel track. The Amtrak train was authorized to proceed through the interlocking at 105 m.p.h. The Conrail units were to stop short of the interlocking, permitting the Colonial to pass through.

Three distinct warning devices had been installed to alert the Conrail crew to the need to slow and stop:

- Wayside signals, the basic "stop and go" warning devices of the railroad industry.
- Cab signals, which are miniature versions of the wayside signal installed in the interior of the locomotive cab.
- The alerting whistle, a device designed to warn a distracted or inattentive crew that a slowdown or stop is approaching. The whistle sounds at the moment cab signals issue a slowdown order, and continues to sound until the engineer responds.

FRA regulations require predeparture testing of both the cab signal and the alerter whistle. The Conrail engineer has stated that he performed both tests prior to departure, and found the systems to be operative.

The event recorder recovered from the lead Conrail locomotive shows graphically what transpired. (See attachment "A".)

The Conrail units approached the interlocking at 60 m.p.h. At 11,793 feet from the track junction, the first wayside signal became visible. The engineer contends that it displayed a "slow to 40 m.p.h. and proceed" aspect. We believe it ordered him to slow to 30 m.p.h. and prepare to stop. That conflict is academic, however, because the event recorder reveals that he proceeded through the signal at a constant 60 m.p.h.

As he passed the approach signal, the cab signal should have displayed a "slow to 30 m.p.h." order, and triggered a warning from the alerting whistle. As the event recorder illustrates, the engineer nonetheless continued at a constant 60 m.p.h.

At 5,375 feet from the track junction the home signal became visible. All parties agree that the home signal functioned properly, ordering the freight to an absolute stop. The engineer continued through this sight point at a constant 60 m.p.h.

At 4,647 feet from the track junction the cab signal flashed a "slow to no more than 20 m.p.h. and prepare to stop" warning, and the alerting whistle was again triggered. As the event recorder illustrates, the Conrail freight actually accelerated through this point, to a maximum speed of 62 m.p.h.

As the National Transportation Safety Board's (NTSB) post-accident simulation illustrated, the stopping distance for this Conrail freight under normal braking procedures is approximately 2,800 feet. In emergency braking it is shorter. Had the train crew observed and responded in a timely manner to any of the six warning signals, it would have stopped short of the interlocking. But as the event recorder illustrates, the train continued to accelerate until it was a short distance from the intersection, where the crew apparently perceived the danger and threw the train into emergency braking. It ran through the switch, and stopped less than seven seconds before impact.

Post-accident testing of the three warning systems disclosed the following:

- The wayside signal system performed properly under every test administered during five days of intense post-accident testing. FRA discovered no evidence contradicting the data on the signal event recorder, which indicates that the wayside signal operated properly at the time of the accident.

- Investigators found, however, that the alerting whistle did not function properly because it had been tampered with and intentionally disabled. Duct tape had been placed across the air nozzle, silencing the whistle and effectively disabling the principal safety device designed to ensure crew attention. Tests confirmed that the alerting whistle worked properly when the tape was removed.

- There was a curious finding regarding the cab signal system. The engineer has certified that he tested the cab signal prior to departure, and found each of the four lights operating properly. We have no reason to question the accuracy of his statement. But at the scene of the accident, investigators found one of the four cab signal bulbs missing -- not burned out, but missing. Otherwise, the system operated as designed. I will not conjecture on how these apparently contradictory circumstances can be reconciled. It is essential to note, however, that the absence or removal of this particular bulb would not have affected the cab signal's ability to either trigger the alerting whistle, or provide the critical "slow to no more than 20 m.p.h. and prepare to stop" warning 4,450 feet from the interlocking.

As the Committee is certainly aware, toxicological tests taken after the accident have proven negative for the three Amtrak employees tested. Both Conrail crew members tested positive for cannabinoids in both blood and urine. These findings will be considered with all other evidence developed during the investigation of the accident.

Obviously, issues of probable cause remain open in this investigation. Nevertheless, the data developed over the last 14 days fits an all too familiar pattern. Track, signals, braking systems--the hardware we govern with regulations and use our inspectors to monitor--appears to have functioned properly, to the extent it was not disabled. And yet a serious accident occurred. The investigation is now focusing, as it has so often in recent years, on human performance.

Federal inspection practices have tightened considerably over the past five years, and the industry's cash flows have improved. With these trends has come a consistent improvement in the railroads' safety performance.

Railroad accident statistics have improved annually and dramatically, with 1985 producing the lowest accident rate in the industry's long history. Figures for the first nine months of 1986 reflect an accident rate more than 20 percent lower than the comparable period in the record year of 1985. Overall, accident rates in the railroad industry have been cut in half since the passage of the Staggers Deregulation Act.

But as accident rates have fallen, the pattern of causation in railroad accidents has shifted. Traditional causes, such as track and signal failure, have declined sharply. Track related accidents, for example, have fallen more than 65 percent in the 1980's. At the same time, human performance accidents have become an increasing percentage of all accidents, and a dominant cause of the truly serious incidents. We are now past the era in which we could easily generate dramatic improvements in safety with a few more track inspections, or the investment of additional dollars in eliminating deferred maintenance. The challenges of the future will be far more complex. If we are going to keep the accident rate moving downward, we need to develop mechanisms to deal effectively with the very complex issues that arise from human performance accidents.

FRA has played a meaningful role in driving the improvement in accident rates by analyzing every major accident, sorting through numerous post-accident recommendations, and forcing change wherever necessary through regulation or voluntary agreement. That process is at work today in the aftermath of the January 4 tragedy. While I am certain the Committee will have a number of questions and proposals as we proceed with this hearing, let me begin that discussion by commenting briefly on the major points that have emerged in public discussion, and our discussions with Committee staff, over the past fourteen days.

1. Tampering

In this accident, a basic warning device designed to insure crew attention in a stopping emergency had been intentionally disabled. This is not an isolated incident. During the week of January 12, an FRA dragnet of the five major yards on the Northeast Corridor discovered 6 locomotives with whistles disabled in an identical manner -- notwithstanding the fact that considerable advance warning of the inspection was given. We have received continuing reports of tampering on "dead man controls," and some even on Automatic Train Control.

This is an extremely serious problem. The best safety devices we can design will have little impact if they are disabled by the very people they are designed to protect -- railroad employees. And our ability to deal with this issue is impaired by the approach taken in the Railroad Safety Act, which gives us only the authority to sanction railroad companies--and no civil enforcement authority over railroad employees.

We will have to work with both the railroads and the railway supply industry to determine what modifications, if any, can be made to state-of-the-art equipment to render it less susceptible to tampering. But few devices can truly be made tamper proof. We are going to need the active support and involvement of railway labor leaders in creating a peer environment that does not tolerate this type of equipment tampering.

2. Automatic Train Control

Automatic Train Control (ATC) -- which forces a locomotive to slow in response to a signal should the engineer disregard it -- has been a functioning part of Northeast Corridor operations for a number of years. Roadbed transmission units have been installed on the Corridor from Washington, D.C. to Boston; virtually all Amtrak power units operating on the Corridor have now been equipped with ATC receivers. The Amtrak locomotive destroyed in the collision of January 4 was ATC-equipped.

It's doubtful that ATC will be extended to other regions of the country. Installation costs for track infrastructure range from $160,000 per mile for single track to $240,000 per mile for double track. ATC receiver units cost $35,000 to $50,000 per locomotive. The cost of retrofitting only the nation's signalled main lines would exceed $13 billion -- which approaches the net worth of the railroads operating that trackage.

In the Northeast Corridor, however, the most expensive part of the ATC system -- the roadbed transmission infrastructure -- is already in place. Because of FRA's efforts, much of that system has been upgraded. Since this is the area of the country with the heaviest passenger volume, and the area in which passenger trains operate at the highest authorized speeds, we believe there is merit in exploring the feasibility and potential safety impact of requiring that non-Amtrak locomotives operating on the Corridor be equipped with receiver units. Freight volumes on Conrail have declined substantially since the costs and benefits of such an approach were debated a decade ago, and the issue is one of a number of options worth revisiting in our post-accident assessment. We intend to do so.

Having financed the modernization of ATC on the Northeast Corridor, we are thoroughly familiar with its advantages and its limitations. And I must caution the Committee that this system is not a panacea.

ATC cannot prevent an accident that involves false proceed signal indications, since the signal system triggers the ATC. It addresses one, but only one, of the several accident situations that can arise in a railroad operating environment -- the case in which a train crew fails to respond to warning devices and runs an operating signal. That is an extremely rare occurrence, although its consequences can be severe. The system is susceptible to tampering, and freight operators have questioned whether its effectiveness in stopping short, light weight passenger trains necessarily implies that it would be equally safe or effective in stopping heavy long haul freights. While these questions are susceptible to resolution, and remedial design if necessary, they are factors to be weighed and judging what is in fact a complex and difficult issue.

3. Freight off the Corridor

As recently as November 1986, FRA submitted to the Congress a comprehensive report summarizing options for diverting freight traffic from the Northeast Corridor. Similar reports had been published by this Agency and the United States Railway Association (USRA) in the mid 1970's and early 1980's. Freight diversion is an extremely complex issue. For costs ranging from $23 to $344 million, systems can be constructed by Conrail and connecting railroads to shift from 26 to 100 percent of freight traffic to other lines. But these figures do not include additional operating costs for Conrail, nor do they measure the impact of added circuity on Conrail's operations. Large scale diversion would also shift freight traffic from the most modern rail Corridor in the nation, with state-of-the-art safety devices and without grade crossings, to a line with more than sixty grade crossings and conventional safety systems. Full diversion would, in addition, deprive Amtrak of more than $25 million in revenues.

The various reports recommending freight diversion have done so principally for reasons of efficiency and improved maintenance capacity, with safety a secondary objective. There is nothing inherently unsafe about shared passenger/freight operations. Amtrak shares every mile of its 23,500 mile system with freight operations, as American passenger trains have done for more than 100 years. Nor is there anything in this accident unique to freight operations. A signal that fails does not distinguish between passenger and freight, and a crew that misreads or ignores a signal in a freight locomotive is just as likely to do so in a passenger cab. Only in the extremely rare case of a shifting load or overhanging freight on parallel track operations, is there any accident exposure unique to shared trackage.

Of course, the exposure to accident potential is in direct relation to volume, and by lowering volumes on the Corridor, diversion would reduce safety exposure to at least some extent. This is not an issue that can be addressed through regulation. Conrail's right to run on the Corridor is a property right, resulting from an easement retained in the transfer of the Corridor to Amtrak. To eliminate Conrail's right to operate on the Corridor, that easement would have to be condemned, and compensation to Conrail provided.

4. Crashworthiness

FRA has worked with Amtrak over a period of years to redesign intercity passenger cars to improve their ability to survive impact accidents and derailments. As a consequence of those efforts, Amtrak vehicles are now equipped with crash posts, seats have been retrofitted with improved locking devices, and a prototype luggage restraint system designed especially for intercity passenger traffic has been developed.

This is the only true high speed accident Amtrak has experienced in this decade. We must respond to this tragedy by analyzing the impact of those design changes, and developing further refinements where necessary.

On the day after the accident, FRA inspectors photographed the interiors of the surviving cars, and are translating those photographs into charts defining the effect of the impact on Amtrak's interior fixtures.

Preliminary counts on seat survivability are encouraging. Only nine of the 692 seats in the surviving cars appear to have separated from their moorings. That is an extraordinary result in a collision between an object moving at 105 m.p.h. and a stationary object. In the past, seat separation had been a problem in accidents at lower speeds. We have determined that approximately 15% of the seats rotated to some degree, and are attempting to determine how much of that occurred on impact, and how much is a consequence of rescue operations. We will evaluate the safety impact of those findings, if any.

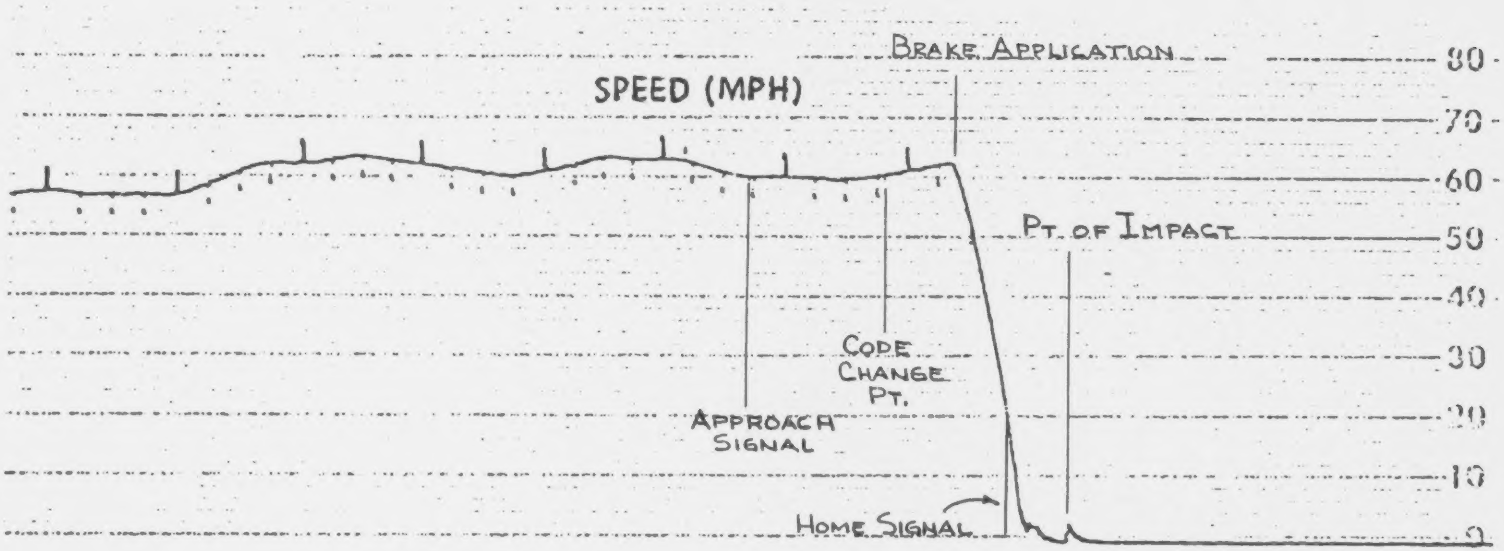
Inspection of the post-accident vehicles has reinforced our standing concern about loose baggage. While baggage is rarely implicated in actual injuries, its presence in aisles and doorways is an obstacle to maximum efficiency in rescue operations. FRA has been working with Amtrak since last summer to develop prototype designs for a luggage restraint system adapted to the particular needs of railroad passengers. In-service testing is scheduled to begin in early February, and the data compiled from this accident should assist us in evaluating and, if necessary, refining the prototype design.

Finally, despite a retrofit by Amtrak to resecure the microwave ovens in its cafe cars, it appears two of these ovens came free from their moorings on impact. While they caused no known injuries, we are concerned about the potential for injury and will work with Amtrak to determine whether the microwaves in this train had received the retrofit, and if they had, to develop a more effective system.

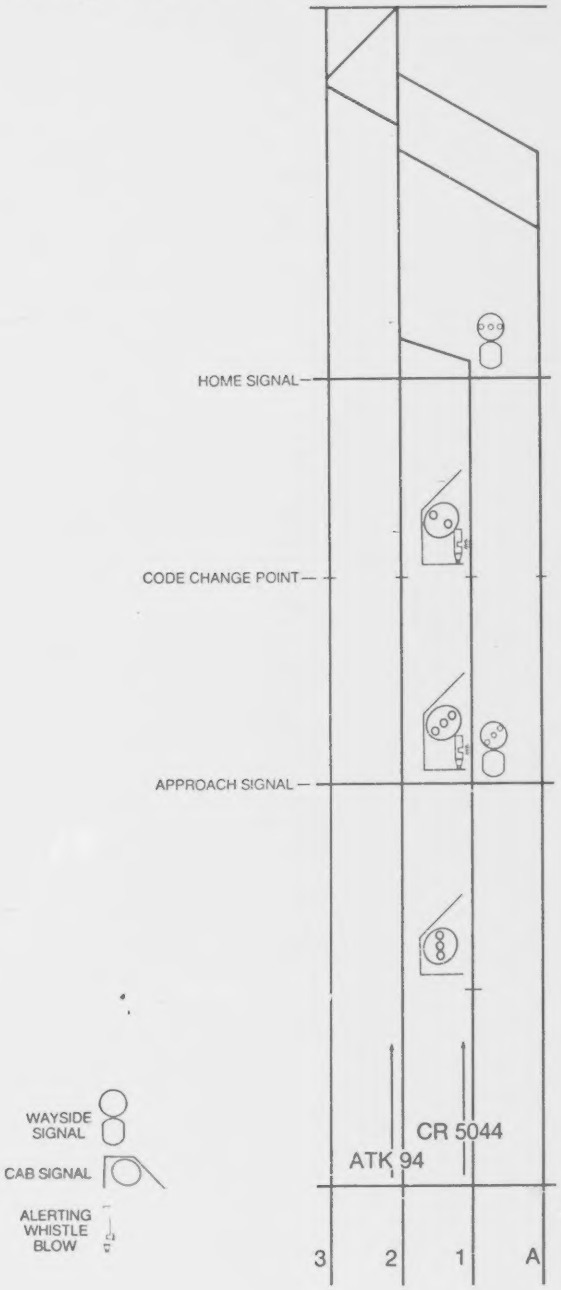
In underview, however, it is remarkable that in an accident as severe as this -- with a train striking a standing object at more than 100 miles per hour -- 579 of the 595 crew and passengers survived, and more than 365 walked away without injury. We have made progress, but we can do more and will leave no stone unturned in that process.

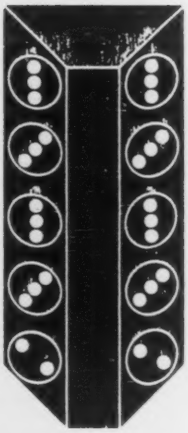
ATTACHMENT A

CONRAIL LOCOMOTIVE SPEED TAPE



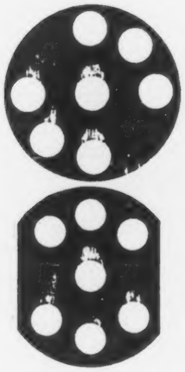
Conrail 5044 Movement, January 4, 1987





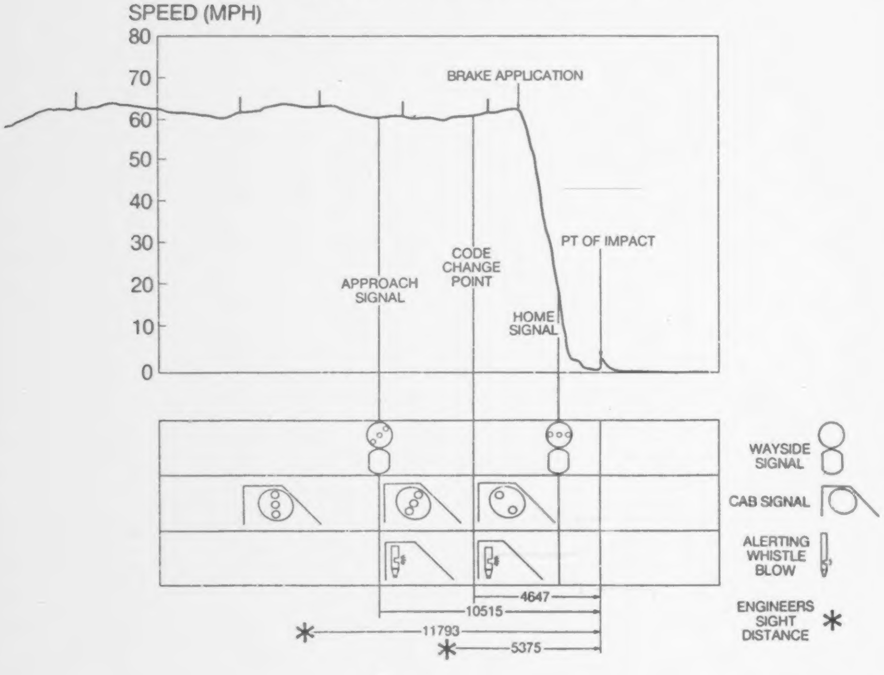
Cab Signal

Alerting Whistle

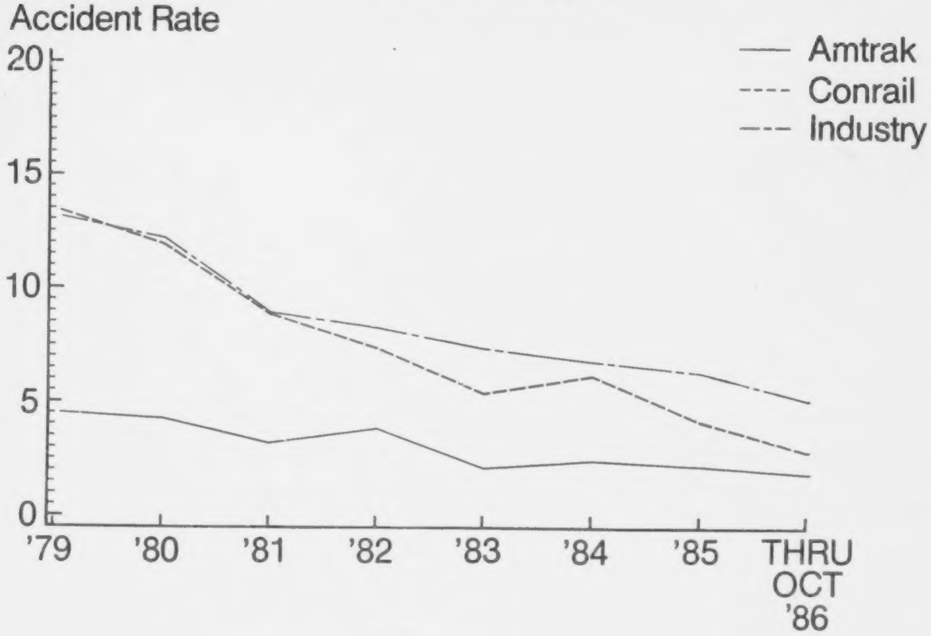


Wayside Signal

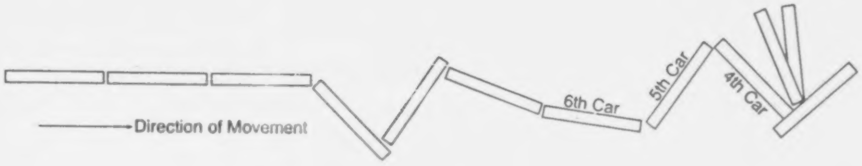
Speed & Signal Indication-Conrail

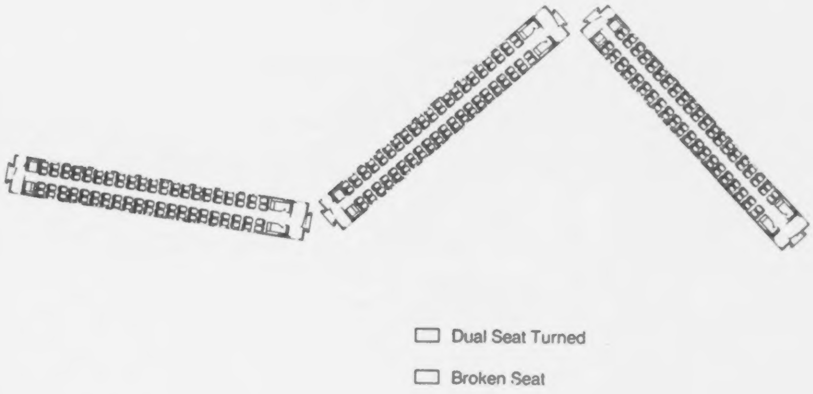


Accidents Per Million Train Miles Industry Vs Amtrak and Conrail

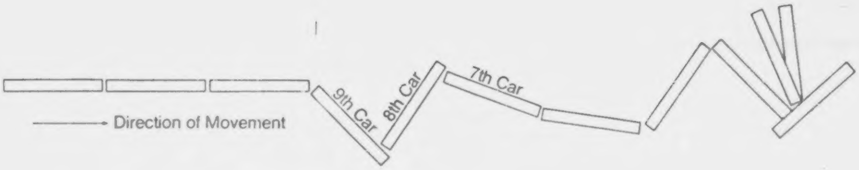


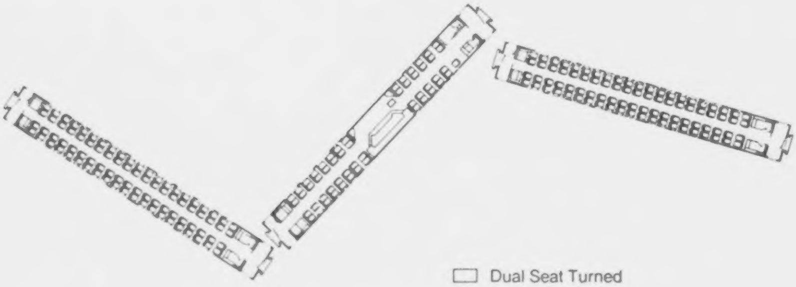
Passenger Car Orientation and Interior Condition





Passenger Car Orientation and Interior Condition

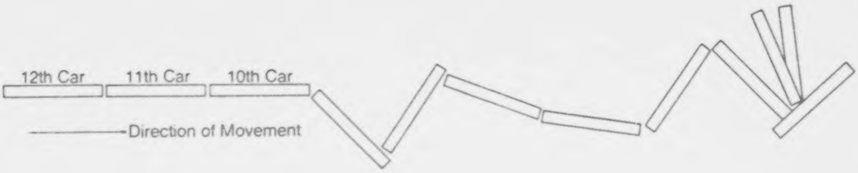


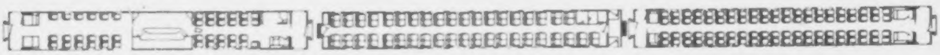


▭ Dual Seat Turned

▭ Broken Seat

Passenger Car Orientation and Interior Condition





▭ Dual Seat Turned

▭ Broken Seat

Senator LAUTENBERG. Thank you, Mr. Riley.

I am sure some of the statements that you made will be of interest to other witnesses, and we look forward to hearing their comments about some of those observations.

Mr. Riley, the critics of FRA have charged that by accident or by design, that instead of being a watchdog as Congress intended, that in fact, the FRA is a lapdog of the rail industry.

And the question arises, despite the efforts to date whether the agency has the will or the resource to establish the kind of safety regulation program that perhaps might be at odds with the carriers, you, or that in fact organized labor has been more willing to cooperate than suggested by your comments.

But I would like to look at some of these issues in light of this accident. We are pleased of course, Mr. Riley, to see the progress that is being made as indicated by the artfully done charts and the statistics presented there.

The fact is it is little consolation to those who were killed, their families, or those who were injured in the declining accident rate.

Technology has changed over the years, and we keep working on and hoping we will be able to create systems that are in fact foolproof, not just tamperproof.

The whistle tampering, the disabling the cab light, you indicate in your testimony that tampering with safety devices is a relatively widespread problem, including the deadman controls and automatic train control.

Federal regulations require that trains be inspected before they leave the yard. What is required and who inspects the locomotives before they leave the yard?

INSPECTION PROCEDURES

Mr. RILEY. There is an inspection procedure before leaving the yard. They are required to go over the checklist. And the reason for that is that it is their lives that are on the line. We have always required the outgoing crew to perform the inspection for that reason, rather than the crew that is exiting.

Senator LAUTENBERG. Do the outgoing crews perform this service?

Mr. RILEY. They perform that inspection.

Senator LAUTENBERG. Do they certify to that inspection?

Mr. RILEY. If anyone other than the engineer of the outgoing crew performs the test a certification has to be written. The engineer does not have to write a certification since it's his basic responsibility.

In other words, if there is a departure from the norm which is an engineer inspection, then there has to be a certification.

Senator LAUTENBERG. I think the captain of a passenger aircraft typically does confirm he has been through the inspection. It seems like an appropriate precaution.

Who walks the train to make sure all the cars are coupled and the brake systems work?

Mr. RILEY. Let me yield to Joe Walsh on that.

Mr. WALSH. Mr. Chairman, coupling of the cars and lacing up of the airbrake hoses normally is assigned to a car department employee, which is called a car inspector, in most instances.

In rare instances or some instances that work can be assigned to the crew, especially at outlying locations.

Senator LAUTENBERG. Do you require any certifications that the inspections are carried out each time that the train is dispatched, whether it's coupling or the engine review?

INSPECTION CERTIFICATION

Mr. RILEY. If the inspection is done by anyone other than the departing crew, we do require a certification. We do not require that the crew, itself, sign the certification.

Senator LAUTENBERG. Are the carriers required to retain these certification documents for later inspection?

Mr. WALSH. I think we are talking about apples and oranges, Mr. Chairman. If you are talking about the equipment, itself, boxcars, gondolas and that, there is no requirement to keep a record of it.

The locomotive, which is the power unit, requires a daily inspection. That daily inspection can be assigned to either the crew or, in some instances, the mechanical department.

That does require a daily inspection card in the locomotive that is signed by the person making it.

The crew can make that inspection any time during their 8-hour tour of duty and sign it. We also have a 92-day inspection, and there is a card that has to be signed.

Mr. RILEY. They have to be retained, Mr. Chairman.

At one time we required them to be sent in to FRA. And frankly, when I got there I found enormous stacks in the agency because there was too much mail to sort through. They are now required to be retained at the company.

Senator LAUTENBERG. I was interested in Mr. Walsh's comments about apples and oranges. The fact is that there is an opportunity for things to go awry in the braking mechanisms within the cars. It's not only, though primarily in the power unit. The type of car on the passenger train affects the speed at which it can be operated, so there is a concern, is there not, about all the components that make up——

Mr. RILEY. Of course there is. Last year the last rulemaking we did was to shift from manual inspections of power brake systems to telemetry inspections because the traditional system of manual inspection only permitted inspection when the train was stopped.

It told us nothing about the system when the train was moving, and logic tells you it can fail in either case.

We have now provided for telemetry devices which will enable the engineer to determine at all points in time the function of his brake system.

The proceeding was a 2-year fight because it affected the employment of the individual who used to perform the test manually.

DRUG ABUSE

Senator LAUTENBERG. I want to talk for a moment about drug abuse and the role it may have played.

Are recently implemented FRA regulations to make sure that personnel under the influence are stopped from going to work sufficient?

Mr. RILEY. I think the regulations as written are sufficient to do the job within the limits of our authority. I think there are things that could be done perhaps statutorily that we cannot do by regulation.

I would be glad to expound on the regulations if the committee would like me to. It's really a rather brief summary.

Senator LAUTENBERG. We will submit questions that we don't get to you today in writing and ask for your response.

Mr. RILEY. That's fine.

Senator LAUTENBERG. The FRA drug and alcohol rule now in place prohibits employees from reporting for covered service or remaining on duty while under the influence or impaired by alcohol or controlled substances.

Mr. RILEY. Correct.

Senator LAUTENBERG. The rule also provides for drug and alcohol testing for reasonable cause which includes reasonable suspicion based on the observation of employee behavior. When a train crew reports for duty, to whom do they report?

Mr. RILEY. Train crews report to differing people at differing places. There are outlying locations where a train crew, because it's the only crew on the scene, does not report to supervisory personnel.

EMPLOYEE CHECK-INS

Senator LAUTENBERG. How then is the factor of reasonable suspicion entered into in terms of making a decision whether or not these people are prepared to go to work without impairment?

Mr. RILEY. Because in the course of all of their shifts, whether it is at the beginning or the end, a railroad crew, with very few possible exceptions—there is always an exception in any demographic—is going to encounter management personnel at a switching point, a yard point, or loading point.

We cannot guarantee, Mr. Chairman, that every one of the 300,000 railroad employees is or can be observed every day.

What we can do is give management the broadest testing authority consistent with law. And we have been in court for 1½ years trying to sustain that in a lawsuit in the Ninth Circuit filed against us by labor.

Senator LAUTENBERG. Would you be satisfied, Mr. Riley, if you were directly in charge that somewhere along the way someone is going to be observed by a member of management or supervisor that says, "Uh-huh, we have something to be concerned about here," and wouldn't it be terrible, as we recently found out, though not suggesting there was an involvement of substance, we found out after the duty had been completed or while the train was under way?

Mr. RILEY. Mr. Chairman, I can neither guarantee you that every symptom of alcohol or drug use is recognizable or that every employee on the system will in fact be inspected at some point in the shift.

But we have two options for inspecting. One is to grant reasonable cause authority for testing and one for random testing authority.

The advantage reasonable cause authority has over random authority is two-fold. In a random authority testing scheme, once you set up the grid you can only test that percentage of employees. If you find another employee you suspect, you can't test him.

Reasonable cause allows inspection beyond the numerical limits of random testing. And if the chairman is asking me to guarantee perfection, I don't believe we can create a system that does it.

I think we have gone as far as we can go within the legal constraints we have. I do think Congress could enact a random testing law. I would not oppose that.

Senator LAUTENBERG. Mr. Riley, we are not looking for perfection, we are looking for improvement. We have an obligation, you and I and all of us gathered here, to do what we can to protect the traveling public.

I don't really take a lot of satisfaction, I must tell you, out of the fact that we are gaining on it. Again, we look back at this accident, and we all wish it hadn't happened and that we had the systems in place that would have stopped the train and prevented the human intervention that apparently was largely responsible for what took place.

In the area of enforcement and compliance with regulations, since we do have often negotiated settlements, should there be this cooperative arrangement between the two—to use the proverbial, the fox and the chickens—where the supervising agency is negotiating with the offenders in this case and arriving at settlements.

As I understand the statistics there has been a pitifully small number of fines and penalties imposed in relation to the number of infractions.

PENALTIES AND FINES

Mr. RILEY. Senator, there are three distinct questions there. First, the percentage of fines imposed in relation to the number of infractions. Our inspectors in the field write two kinds of citations.

One, violations. Those are recommendations to the home office that violation cases be prosecuted and fines levied. We had about 5,000 of those last year and commenced collection in 99 percent of those recommended cases.

Then we write a large number of defects called exceptions. Our rules are very literal. If track is even one-tenth of an inch out of camber or gauge we will write an exception telling the company of that fact.

That is not a safety danger and you couldn't even feel it if you rode over it. We write about 250,000 exceptions a year which are notices to the company of nondangerous conditions that we simply want them to be aware of.

So the bottom line is it is often, in an attempt to misconstrue our safety program, alleged that we only fine on 5 percent of our violations. We fine on 99 percent. Exceptions are not violations.

Second, as to cooperative arrangements, we have a double tracking enforcement program. Our day-to-day spot inspections which have increased annually in the 3 years I have been at the agency are not cooperative arrangements.

When we find violations we cite them and levy them. We do however have system assessments which originated with GAO.

In 1982 GAO recommended that FRA shift emphasis from onsite inspections to cooperative arrangements with companies to assess the entirety of their safety performance.

I agree with that, but that's not a substitute for onsite inspections. We have actually increased the number of onsite inspections performed every year, which are our mainstay.

System assessment is a case where we take the entire performance of a railroad in context. Our senior officials sit down with senior officials of the railroad and look at every phase of its operations rather than the piecemeal approach you get with daily inspections.

We have assessed about nine railroads in recent years and in every case the performance of the railroad has improved after the assessment.

I guess the bottom line—you asked if the agency was a, quote, lap dog, end quote—we have been able to cut the accident rate in half over the last 9 years. And I rest my case.

We are not satisfied with that. Any safety agency satisfied with its improvement just is not doing its job.

Senator LAUTENBERG. Mr. Riley, I thank you.

We have tried to stay with the 10-minute limit for the first round. If necessary, we will go around again.

Mr. Riley, if you could stay after your appearance right now, if you could stay with us we might want to call you back.

Senator D'Amato.

WARNING DEVICES

Senator D'AMATO. Thank you, Mr. Chairman. I would like to pursue with the witness just a brief overview.

Am I correct, Mr. Riley, in your testimony, in summarizing it, that the Conrail locomotive went through at least six different warning devices.

Mr. RILEY. Yes.

Senator D'AMATO. The wayside device, inside cab signal, even though one of the bulbs was missing, and there were another series of warning devices before the collision?

Mr. RILEY. Yes; at least three of which were working by everyone's admission, at least six devices at least three of which were working.

Senator D'AMATO. Would you go over those devices again?

Mr. RILEY. Yes; two wayside signals, one of which ordered him to slow to either 40 or 30 attention depending on which version.

Senator D'AMATO. Both checked out?

Mr. RILEY. Yes; the second wayside signal which told him to stop and two cab signal indications.

Again all parties agree the final indication worked. If the bulb was missing, the prior indication would not have. And we have two whistle warnings and we know what happened to the whistles.

Senator D'AMATO. So you have four that were working?

Mr. RILEY. Correct.

Senator D'AMATO. They tested out as working and functioned properly. I intend to come back to the whistles because I think something has to be done to give you the legislative authority to take the appropriate action. However, there were other tests conducted on the Conrail personnel, the engineer and brakeman, with respect to tests concerning their urine.

Mr. RILEY. Yes.

Senator D'AMATO. And blood sampling to see if they were impaired by substance abuse; is that correct?

Mr. RILEY. That's right.

SUBSTANCE ABUSE TESTING

Senator D'AMATO. Who performed the tests and what were the results of the tests?

Mr. RILEY. Tests were performed at the FAA Civil Aeromedical Institute [CAMI] Lab, where all the post-accident testing is done, in Oklahoma City.

We made the results of the tests public, and I would be glad to put them into the record. Both employees tested positive for defined amounts of cannabinoids in both the blood and urine and there were traces of THC in the plasma.

[CLERK'S NOTE.—Laboratory reports are kept in committee files.]

Senator D'AMATO. THC?

Mr. RILEY. That is the psychoactive element in marijuana. I have declined to reach an opinion, legal or medical opinion, on what this means in terms of impairment. I am going to leave that to the experts.

Senator D'AMATO. Will you put that into the record for the hearing, please?

Mr. RILEY. I will.

Senator D'AMATO. As well as the test results?

Mr. RILEY. We will put a copy of the document we received from the laboratory into the hearing record.

Senator D'AMATO. Could you tell me what level of cannabinoids were detected in the urine and blood stream?

Mr. RILEY. The urine for the engineer, 67 nanograms per milliliter and in the plasma, 45 nanograms per milliliter. In the brakeman, 87 in the urine, 13 in plasma.

Senator D'AMATO. While you are not, and the courts are, in a position to determine what level is impairment and what level is not, I had an opportunity to speak to some people who are experts in this area.

To put it mildly, the Conrail personnel tested were certainly under the influence and were certainly impaired. Any reasonable person could determine this. They passed through at least four, at least four of the signals that were operating for them to hear. They tested as working. I have to tell you that this clearly, clearly calls for the Congress to come forward to provide a form of substance-abuse detection, not after an accident, but before, recognizing individual rights and constitutional rights, and also having a strong employee program of assistance for those who need drug and alcohol counseling.

Mr. RILEY. Senator, I agree so strongly with you on both those points. Anyone who believes a rule alone can solve the problem is mistaken. It can't counsel, it can't create a place for employees to go.

You need a national voluntary program. We have done our best to promote that.

As to testing prior to an accident you are also absolutely right. The problem with the original NTSB recommendations on the alcohol and drug rule was that they were purely reactive, called for Federal Rule G, improved reporting and post-accident testing.

That is why we went beyond those recommendations to give the right to perform reasonable cause testing, preemployment drug screens in all cases and to create a bypass program so an employee with a problem could step forward, keep his job and get treatment.

EMPLOYEE PROTECTION

Senator D'AMATO. I think it behooves those of us in the Congress to work to effectuate a legislative program that recognizes their rights, but, at the same time, recognizes the right of the public to be assured that those who are at the controls of our nation's railway systems, behind our buses, flying our planes, are provided a proper program for screening and testing.

This really highlights this tragedy. While there will be others more expert to analyze the test findings, there is no doubt in this Senator's mind they were absolutely impaired and shouldn't have been behind the throttles of that train.

There is no way you could reasonably explain coming through four different signal devices.

Now, of course, we come to another perplexing question. You said these people and the engineer, 1 hour and 15 minutes prior to the accident, certified by way of their taking that train out that all of the safety devices, including the whistle that you have in your hand, were working. Is that correct?

Mr. RILEY. That's correct. This whistle is actually removed from another Conrail train and is an actual tampering instance.

Senator D'AMATO. Was there tape around the whistle?

Mr. RILEY. Yes; placed across the mouth of the whistle very much like that.

Senator D'AMATO. You said that thereafter you notified the employees that you would go out and check with any of these whistles.

I understand you actually notified them and said, after the accident, that you were going to check the cabs, and you still found six whistles that were tampered with. Is that correct?

Mr. RILEY. We gave public notice that we were going out 24 hours ahead of the time we did and we still found six of them. And as recently as this weekend we found four more.

EQUIPMENT TAMPERING

Senator D'AMATO. What authority does the Federal Railroad Administration have to penalize individuals who have tampered with lifesaving equipment?

Mr. RILEY. Even if I could catch the employee who did it, I have no authority over him. The Railroad Safety Act only authorizes us to regulate and penalize companies. We can take no action against an individual employee. Labor has held to that position for many years. I think it ought to be changed.

Senator D'AMATO. Mr. Chairman, I make the suggestion that we as a committee explore this. I know of your great concern for the rights of individuals. Yet, there comes that duty. If somebody tampers with a lifesaving device, we shouldn't have to depend upon a company taking disciplinary action. The Federal Railroad Administration should have the right to take immediate action.

I would hope that if there is anything we can do it would be to say very clearly that we are going to enact the kind of legislation that will take appropriate steps, appropriate steps to penalize those people and to punish them severely for tampering with lifesaving equipment.

It was not only their own lives they risked. If they were putting their own lives at risk, you could say, well, go to it. However, they have a greater duty to the public being charged with their responsibility, and it's absolutely unconscionable what they've done. It would appear that something has to be done.

I would like to touch on one other matter before my time runs out.

Let me ask you, have you ever submitted or drafted any legislation giving the FRA authority to take disciplinary action or other actions in a similar case?

Mr. RILEY. We have not in my tenure, and I think this is a golden opportunity to do so.

Senator D'AMATO. I would hope you might submit proposed legislation to that effect to this committee and to the Labor Committee Mr. Weicker is on. I think it's a time to examine it.

It might be a hot issue, but I think reasonable people, including the unions, have to come to recognize that this type of activity is completely unacceptable. I'm sure they don't approve of it.

Mr. RILEY. I am sure they don't.

NORTHEAST CORRIDOR DUAL USE

Senator D'AMATO. Mr. Claytor has brought up with me the question of the dual use of tracks, some of the most heavily trafficked commuter lines in the country.

I see Senator Mikulski, and I know she has raised this issue because it's an important issue to her. Why do we have this dual use of tracks at this time? And why hasn't an experiment been undertaken to see what can be done about it?

Have you undertaken any experiment to see what can be done?

How much would it cost to put in another trackage system? What about using some of the proceeds from the sale of Conrail, we are going to get a billion dollars plus, to create a dual system?

Mr. RILEY. Senator, several questions and they are all good ones.

We did a pilot program in 1981, did a test run on the CSX line. As recently as November 1986 we submitted a printed report to Congress listing nine different options Congress could have for getting freight off the corridor.

Let me tell you in overview that is not an issue we can regulate. Ability to run freight on the corridor is a property right obtained in an easement by Conrail when the corridor was sold. That would have to be condemned and them compensated.

USRA examined this in 1975, FRA in 1981 and FRA in 1986. It's a complicated issue. For costs ranging from $23 million to $344 million you could create interconnections that would enable freight to be diverted off all but a short piece of the corridor.

The down side of that is this. You are then diverting the freight from what is unquestionably the most modern, well-equipped and safest track in the country to another track that is not nearly as safe.

On the Northeast corridor you have no at-grade highway crossings. Off the corridor you have at least 60 such crossings down to Baltimore and Washington.

I am hard put to tell you passenger and freight service is inherently incompatible on track, it's been done that way a hundred years, and also on the corridor for many years.

When a signal fails it doesn't distinguish between passenger and freight, and an employee who will run a signal will do so on either.

By the same token any time you reduce volume on any piece of track you reduce potential accident incidences. The one area where there may be exposure is parallel high-speed operations.

The report we made in 1986 outlines the pros and cons. It's a complex issue and we would like you to look at that.

In addition, recognize the automatic train control on the corridor is a less expensive alternative because it does essentially the same thing to a point.

Senator D'AMATO. Thank you, Mr. Chairman.

Senator LAUTENBERG. Thank you, Senator D'Amato.

Senator Stennis.

Senator STENNIS. I have no questions, but this is very important testimony.

Senator LAUTENBERG. Thank you, sir.

Senator Weicker.

Senator WEICKER. Thank you, very much, Mr. Chairman.

BUDGET REQUEST

Mr. Riley, does the Federal Railway Administration's budget request for fiscal year 1988 represent the funds necessary to achieve the highest level of safety?

I would like to hear your budget request for 1988. I would also like to know your requests for fiscal years 1987 and 1986.

Mr. RILEY. Getting down to major points, we have requested authority for 330 safety inspectors, of which we received 325. I think 325 is adequate. I would like to have had the 330. The five extra positions would be deputy regional administrators.

We have in addition reduced our research and development outlay from about $15 million to about $10 million.

Here is how that was done. FRA was previously researching not only safety matters, but matters the industry had an economic incentive to research for itself. We have eliminated those matters and retained our basic funding for pure safety research.

I personally believe the 325- to 330-member inspector force has gradually become adequate. When I came to FRA we had 285 inspectors. We have increased it now by about 40.

There was a period of time in the late seventies when the number of inspectors we had was grossly disproportional to the need and I think the safety numbers showed it.

What has happened in the interim is inspectors have become more productive with technology and the industry has suffered large annual losses and consolidated a lot of its operations on trackage.

So I believe with the supplement of the state inspectors that that is adequate. I will submit more detail.

Senator WEICKER. May I ask what the dollar total of your request is?

Mr. RILEY. I am not certain I can give it off the top of my head, but I will provide it before I finish testifying.

Senator WEICKER. Was your dollar total for fiscal year 1988 as you requested it, or as modified by OMB?

Mr. RILEY. In the safety area the dollar total for 1988 was consistent with our request with some small deviations that come from the application of carryover funds.

In other words, the aggregate dollar proposed to be spent was where we wanted it but some of the funding came from the use of carryover funds.

Senator WEICKER. I need for the record, what I would like to see is the record for this year, the budget request for this year and the preceding 2 years in terms of the request and in terms of the actual appropriation.

[The information follows:]

Railroad Safety
Appropriation History
1986 - 87 - 88
(000)

	1986				1987				1988		
	OST	OMB	Cong.	Enacted	OST	OMB	Cong.	Enacted	OST	OMB	Cong.
Field	22,486	22,486	23,175 1/	22,364 3/	23,200	23,200	22,364	22,050	23,504	22,840	24,083 1/
Hdq.	3,877	3,877	3,600	2,675	4,600	4,600	3,674	3,650	4,164	4,014	4,093
ATIP	1,200	1,200	1,200	964 4/	1,200	1,200	200 5/	0 5/	1,200	1,200	1,200
G-I-A	0	0	0	1,435	0	0	0	1,350	0	0	(1,350) 6/
Subtotal	27,563	27,563	27,975	26,570	29,000	29,000	26,238	27,050	28,868	28,054	29,376
R&D	15,550	15,550	10,418 2/	10,144 2/	15,050	9,581	9,581	9,581	10,200	10,200	9,923
Total	43,113	43,113	38,393	36,714	44,050	38,581	35,819	36,631	39,068	38,254	39,299
(With carryover)			(43,029)	(43,204)			(36,819)	(37,631)			(40,649)

1/ Includes pay costs.
2/ Plus $4.636 million from carryover.
3/ Plus $754,000 from G-I-A carryover.
4/ Plus $1.1 million carryover.
5/ Plus $1 million carryover from G-I-A.
6/ Amended request; transfer from Redeemable Preference Shares carryover.

RESPONSE TO NTSB RECOMMENDATIONS

Senator WEICKER. What action has been taken in response to the National Transportation Safety Board recommendation of June 18, 1984, which emphasized the importance of adequate backup safety devices in the event an engineer fails to comply with signals and/or remain alert while operating a locomotive?

Mr. RILEY. Two things. Now we have deadman control devices installed on about 60 percent of all the locomotives in the country.

Here is what they do, and I will tell you the problem with them. They require the engineer every so many seconds to respond by either hitting a pedal with his foot or touching an area of the dashboard with his finger to show he is still awake. If he doesn't respond, the train is brought automatically to a halt.

I don't want to express any sympathy with anyone who tampers with a device, but let me say this. Try sitting in a position for awhile and touching something every 20 or 30 seconds for 2 or 3 hours.

The engineers intensely dislike this device. The pedal device is disabled simply. They put a block of wood on it and leave it there and kick it off when they get into the station.

We generally don't regulate Amtrak, we control the board, so we can by fiat do what we want to do there. We have incorporated that on all one-man-in-the-cab locomotives where I think it ought to be.

I would like to incorporate that on all locomotives, but I haven't done so because I don't believe the system is in any sense operative on the road. We are putting our research dollars into developing a new system.

Our locomotive cab control committee has been doing preliminary work for a new rulemaking on this issue. It will be our next rulemaking after we finish the communications rulemaking we are now in.

We have looked at three different designs for a deadman's control that operates on heat and sonic sensitivity and can't be tampered with and doesn't require this constant touching from the engineer.

We have selected one. We are attempting to develop it ourselves. That type of device may solve the technological problem that has I think rendered the existing deadman's devices ineffective.

There is also an easy way to disable the touching device, but I am not going to tell you what that is on the record. I will be glad to afterward, because I am convinced while everybody knows how to disable the pedal device, not everybody has figured out how to disable the other yet.

The problem is it's a device that addresses a real need. The technology we have today, I would estimate more than a majority of those things are not functioning. We can't catch them. All you have to do is kick the block out.

Enforcing them has proved to be like enforcing prohibition, because an engineer doesn't want to do this and you have to understand why he doesn't want to do it.

So we have put money in developing a new device. NTSB had considered that an acceptable response until last Friday after the accident when they changed their position. We will be into that rulemaking proceeding by the end of the year.

RESEARCH BUDGET

Senator WEICKER. You indicated in your response to my first question that your R&D budget had about a $10 to $15 million decline. Is this the R&D budget that would permit you to go ahead and evaluate these new types of systems?

Mr. RILEY. It declined from $14.5 million to $10 million over 5 years. The $10 million is the core safety program. The remainder is researching things that were not purely safety-related.

We have to meet budget ceilings like anybody else does. Whenever I have had to make those cuts, I have gone after those things the industry has an economic incentive to research. They have no such incentive to research deadman controls. That is why we are doing it.

Senator WEICKER. Do you have adequate funding in this budget to research the types of devices which you are discussing here?

Mr. RILEY. Today we do. You can certainly legitimately ask me that question in 3 months when we have sorted through more of the implications of this accident.

STATE INSPECTOR PROGRAM

Senator WEICKER. Was there a state inspection program?

Mr. RILEY. Yes; that supplements the Federal Inspection Program.

Senator WEICKER. Am I also correct when I say OMB has zeroed that program out?

Mr. RILEY. For 4 or 5 years.

Senator WEICKER. The state program.

Mr. RILEY. Yes; it's a cost-sharing program. The federal government pays, I believe, in the range of 50 percent, they pay 50 percent of the salary of the state inspectors.

There are 325 of those, the federal inspectors, and a little over 100 state inspectors. Faced with the budget ceiling we have to make, we have tried to look for areas where, if funding is reduced, someone else will pick up the responsibility as opposed to areas where no one will pick it up.

If we go from 50 percent to zero funding on the state inspectors the states will have to pick up an average of about $80,000 a state.

In the whole scheme of things we now finance, it had been our view that is less of a problem than say cutting out research funds for the deadman control.

Senator WEICKER. Did they pick it up?

Mr. RILEY. They have not picked it up because it hasn't been cut. Congress has restored the funding each year.

Senator LAUTENBERG. Senator Weicker, I just want to clarify something.

You said that 50 percent of the costs for the state inspectors was provided. It's my understanding that the law allows up to 50 percent, but on balance it runs about 14 percent.

Mr. RILEY. It's up to 50 percent. On balance, I believe it's about 33 percent. We fund the state inspectors up to the maximum of what has been appropriated.

In other words, we have proposed shifting that cost from the federal government to the states but we have spent the money allocated on it.

Senator WEICKER. No more questions.

Senator LAUTENBERG. Senator Stennis.

We are taking the members of the subcommittee first.

Senator STENNIS. I must go to another meeting. I will depart this good hearing.

Senator LAUTENBERG. Thank you, very much.

We are taking the members of the subcommittee first.

WISCONSIN ACCIDENT

Senator KASTEN. Thank you, Mr. Chairman.

I am pleased you have called this hearing because of the growing concern I think all of us share over safety within the overall rail system.

Although this month's Amtrak Conrail tragedy in Maryland caught the public's attention, we have the hearing room jammed, it certainly isn't the first. A number of tragic accidents involving fatalities occurred in the past few months.

On October 9 last year a different kind of Amtrak accident occurred, in this case an Amtrak train on its way from Chicago to Seattle, derailed at a track crossover in Fall River, Wis., just outside of Columbus.

This derailment killed a crewmember and injured 33 passengers and crew.

Last week the National Transportation Safety Board held a 3-day hearing in Wisconsin. Although it still will take some time before the NTSB reaches any conclusions, one immediate conclusion that can be drawn is that major problems exist within our aging rail system, and they are not confined simply to the Northeast corridor.

In the case in Wisconsin, preliminary evidence suggested the radio antenna malfunctioned because it had rusted, rendering the radio virtually useless.

I know, Mr. Chairman, that you and all of us share a commitment to betterment of the entire system, we have worked on air transportation in the past.

Now it's clear we have to be just as concerned about the rail infrastructure in our nation. Hopefully we can find ways to prevent future tragedies like those in Wisconsin and Maryland and other places.

I thank you, therefore, for calling this hearing today and I look forward to working with you.

Mr. Riley, I want to follow up a little bit on what Senator D'Amato was talking about in terms of what you can do when you find either a mechanical device malfunctioned or you find human error or human incompetence. In the case in Wisconsin, it looks like it's going to be clearly some kind of faulty track equipment.

You suggested in your response to Senator D'Amato that if there was faulty track equipment, then you could go back and in some way either penalize or receive some kind of, I don't want to put words in your mouth, you could go back to a manufacturer if it's a faulty antenna, for example.

On the other hand if it's a faulty radio operator or a person whose overridden a safety device, you have no recourse to go back.

Could you first of all describe a little bit what you can do if you find a mechanical problem and what you do when you find a human problem?

EQUIPMENT VERSUS OPERATING

Mr. RILEY. The division really is between employees and companies. We can regulate and penalize a company for not maintaining its equipment or adopting an unsound operating practice.

The operating practice in that accident in Wisconsin was the worst I have seen in my career. I won't expound here, but I will tell you about it if you like.

In terms of individual performance, we cannot regulate conduct of an individual employee. We have tried to indirectly by regulating companies. We can require a company to order its employee to do something, but we can't make the employee accountable directly to us nor can we penalize the employee.

You have hit a very good point talking about radios. It's amazing to me this in this era of satellite communications we have no requirements that trains be equipped with radios. We have requirements if they are equipped.

In October I noticed a rulemaking to rewrite all the radio regulations. By coincidence that hearing is next week. I can assure you the things we found in the Soo Line accident will become known for things they achieved. Radios are something that concerned me for a long time and were always the next priority after an alcohol and drug rulemaking.

Senator KASTEN. You have a derailment caused by faulty track equipment.

Mr. RILEY. Yes.

Senator KASTEN. You are satisfied you are able to take the necessary measures that can tell the committee that you have done what you can to ensure another accident of this type is less likely to occur as a result of what you are doing.

In other words, you can take an action, an action having to do with a piece of equipment or manufacturer and you can come back and tell us, we have done this and we think we are better off, is that right?

Mr. RILEY. That's right. Both equipment and operating practice in that case were the responsibility of the company and we have all authority over that.

In the immediate aftermath of that accident incidentally we contacted all the railroad companies around the country to make sure nobody else was using this operating practice.

Senator KASTEN. Let's take it one more step. I think this is where we are all frustrated.

You implied in your answer to Senator D'Amato's question that there is nothing you can do right now to come back to this committee and tell us that you have been able to either fire an employee or stop a particular practice, their overriding a safety device, and there is nothing you can do to come back to us and say we have done this, this and this and now it's less likely that this particular human error, we will call it an error, is likely to occur. You cannot give us that assurance?

Mr. RILEY. I cannot.

Senator KASTEN. Because of the way the bureaucracy is set up.

And could you expand on the answer?

AUTHORIZING LEGISLATION

Mr. RILEY. Yes; it's the way our authorizing legislation is set up, the Railroad Safety Act. While we can penalize a company for designing a bad system, not maintaining its equipment or putting in bad equipment, if an employee tampers with it we can't reach the employee.

I have tried to do it through the back door on the alcohol and drug rule by requiring the company to do certain things to its employees. I can't guarantee that is going to stand up in court.

That is much harder to do in the case of maintenance or tampering, for example, because there are enormous grievance agreements and procedures that go on between the companies and employees. They take years to play their way out.

The employee fears the company much less than he does the federal inspector. All the inspectors are hired right out of the ranks of organized labor and they know where the bodies are buried to say the least.

I can create a rule that binds the company, I can fine or sanction the company, issue an emergency order against it.

But when there is an individual problem that the company cannot control, I cannot take sanction against that employee, nor can I write a regulation that directly affects the employee.

For example, I cannot write a regulation requiring an employee to turn over alcohol- and drug-related driving convictions to the company. I couldn't do that.

Senator KASTEN. Mr. Chairman, I would like to, it seems to me later today we are going to be able to speak to two people, maybe both of them have half of this answer. We have the president of Amtrak and his operations people. We have also got the vice president, Brotherhood of Locomotive Engineers.

Am I correct in saying the answer to my question and the assurances we would like to have as a committee should come from one of those two people, is that right?

Mr. RILEY. I would like to see them come statutorily from me, too, in the cases where I don't have authority I think they have to come from one of those two people.

Enforcing safety in the workplace is a shared responsibility between the company and the employee, they both have to uphold their end of it.

I would be just as adamant if I could tell you I could regulate employees and not companies. I have been here longer than anybody else has been in this job, so I will never get to use this authority.

But my successor, whether Democrat or Republican, ought to have the same broad authority as the FAA has in the air.

Senator KASTEN. Do you then recommend changes in the law which would give you the authority over individual employees?

Mr. RILEY. I think it is something that has to be done if you are going to have a complete safety program.

Bear in mind obviously due process rights would be attached to anything we did. We are not seeking shortcuts.

I am simply saying whoever sits in this chair after I do ought to have the same authority over both halves of the industry that the FAA does because you hear the rhetoric. The company always tells you it's the employee's fault. The employee tells you it's the company's fault.

The truth of the matter is that in thousands of instances each is right and each is wrong. You have to be able to address comprehensively both sides.

Senator LAUTENBERG. Thank you, Senator Kasten.

Senator Mikulski.

CONRAIL OPERATIONS

Senator MIKULSKI. Thank you, Mr. Chairman.

Again, I would like to thank you for permitting me to participate in these hearings, because we in Maryland have a particulars sense of urgency because two Conrail accidents happened in the corridor within 2 weeks of each other.

Both could have had, and one in fact did have, significant impact on human life. There was the passenger crash, but right before that, there was a major Conrail train derailment on a bridge over the Susquehanna River. The train was carrying hazardous and toxic waste.

Thanks to good engineering skills we were able to prevent a major leak into the Susquehanna River which, Mr. Chairman, provides the major fresh water to both our bay and some of our drinking water.

We are wondering what the heck is going on with Conrail? This accident could have occurred anywhere within the Northeast corridor or anywhere within the country, whether it be Wisconsin or Maryland.

We are wondering first, what the heck is going on with Conrail, and you, Mr. Riley, know that.

Is there in this whole move to privatization, which I supported, now slippage because everybody is more concerned about Wall Street than what is going on on railroad tracks?

And also what concrete legislative recommendations would you need? Do you need more oversight? Do we need more oversight?

We don't want our people killed and we don't want our water contaminated.

Mr. RILEY. Let me address it from two perspectives. First the past and now the present, which is, I think, the way you did it.

The chart we had up illustrates Conrail 5 years ago had a performance worse than the industry average. Over the course of the last 3 years they have brought that ratio down to better than the industry average.

However, we have had a number of Conrail-related accidents over the course of the past year. I am not going to tell the committee that I know all of the reasons for all of those accidents.

But the thing that the system safety approach added to our safety program is the ability to go beyond onsite inspections and do a complete safety assessment of an entire railroad top to bottom.

We tend to do that when railroad accident performance changes. Conrail now heads our list. We are sending our inspectors onto the Conrail system to do a complete system assessment.

That is irrespective of the fact that we own and may sell the railroad, because FRA must relate to Conrail as a private carrier, whether it's ours or somebody else's.

We did this with Amtrak 3 years ago and we are going to do it with Conrail now. That is not an allegation Conrail is an unsafe railway, understand. All railroads go through this.

But we go on beyond the individual onsite inspection and do the top-to-bottom inspection, and we are going to do that.

ACCIDENT RATES

Senator MIKULSKI. There also seems to be a pattern in the charts you demonstrate where railroads carry passengers there seems to be a more meticulous attention to safety.

I note Amtrak had a lower rate of accidents than either Conrail or the private sector. I noted that the private sector had a higher rate of accidents than did Conrail.

There seems to be a pattern, correct me if I am wrong, where freight is involved, be it benign or hazardous cargo, where there is a lack of alertness, lack of conscientiousness.

Is this a flaw, is it because they are carrying wheat instead of people they don't care as much or if they carry PCB's the tempo maybe gains a brisker pace?

Do you require greater oversight or more prodding if it is a passenger train? What is the issue here?

Mr. RILEY. That is actually a very good question.

Senator MIKULSKI. Thank you. [Laughter.]

Mr. RILEY. No; it really is a good question. I frankly think personally in the mind of an engineer when he has a passenger train or hazardous cargo train, that is more important to him than a grain train. Those lines are the No. 1 priorities.

Amtrak's statistic is misleading in this sense for all passenger lines. Amtrak has a very good safety performance and I credit Graham Claytor for doing a heck of a job. Particularly if I put SEPTA on that chart you would see all passenger railroads are not uniformly below the industry average. We acquired jurisdiction over the commuters a couple of years ago. It was a new experience for us.

I personally believe we have some work to do to get the other commuter railroads' accident records as low as Amtrak's. The credit goes to Amtrak the company, not all passenger lines. But you are correct in saying we focus ourselves on passenger and hazardous first.

Senator MIKULSKI. And I think you should. But we need to realize the transportation of freight cargo is not a benign experience, either in the fact that we are now in dual tracking, or some of the issues Senator Kasten brought up, in the Wisconsin area, they carry hazardous and toxic waste through urban, metropolitan areas.

Another question if I may, this is the last issue I wish to bring up. Is this issue related to human conduct, if you will?

HUMAN CONDUCT

Mr. Chairman, I thank you for the fact that you will later on today allow Mr. Roger Horn to testify. He is a professor of mathematics at Johns Hopkins University whose 16-year-old daughter was killed on the Amtrak crash returning to her freshman year final exams at Princeton. We were all particularly moved by the Horn girl's death.

He has some interesting suggestions relating to uniform federal licensing, a national data bank and reportable events outside of the conduct of business.

Specifically this is the issue. There seems to be evidence that the engineer was under the influence of some type of substance abuse. That is to be determined by the courts and they will work their will.

However, that same engineer was arrested 1 month earlier for drunken driving and running a stop sign in Baltimore county at 3:30 in the morning.

This doesn't seem to be a single incident. What it seems to be is that this man appears to have had a pattern of substance abuse which has to affect his on-the-job performance.

It seems both rail management and labor have always viewed off-duty highway driving records as none of our business.

Would you like to comment on that? Is this an area of legislative initiative, recognizing constitutional rights?

Mr. RILEY. Yes.

Senator MIKULSKI. But the fact is that if somebody gets arrested several times for drunk driving and then becomes an airline pilot, locomotive engineer or air traffic controller, shouldn't we have a right to know that?

Mr. RILEY. Senator, I couldn't agree with you more. I think this accident proves it.

We need to find a mechanism to ensure that information gets to the company and any responsible authorities.

We don't have access to the National Driver Register at the moment. I can't tell you that I have in the course of the last week as we have looked at this figured out how to do that, but I have asked my friends at NHTSA and FAA who both face similar issues to meet with me.

We will talk about it and see what kind of proposal we can come up with, either through our own powers or to come back to you on.

While I am not sure every driving violation is indicative, certainly drunken driving violations are things that ought to be known. I do agree with that.

Senator MIKULSKI. I thank the chairman.

Mr. Chairman, perhaps we should explore on our own committee this particular issue, because I know of your own commitment to civil liberties as well as passenger safety. Perhaps this is an area for further exploration.

Senator LAUTENBERG. I thank you, Senator Mikulski, for your contribution.

LICENSING

Mr. Riley, I am going to let you go. I want to close with a quick question. That is, do you support federal licensing for railroad engineers?

Mr. RILEY. Let me answer that two ways.

First, we wouldn't have the authority to do it even if we wanted to do it, because we don't have the authority to put that requirement on the employee and reach through them.

Senator LAUTENBERG. Do you support it?

Mr. RILEY. Now, it's been my view that if we did have the authority, that probably it would not achieve as much good as it costs.

Let me tell you why. It's not a firm opinion, it's an inclination. We would have to create a large testing and licensing infrastructure similar to FAA's. I am not certain what we get out of that.

In the case at hand I am told engineer Gates had one of the best testing records, 100 percent on his proficiency and efficiency test, he clearly obviously would have been licensed. It wouldn't have touched this incident.

As we have investigated accidents there is the perception in our minds, there was in my mind, when you have human performance failure, it normally comes from inadequate training or low skills.

What I found to my surprise is that mistakes do not seek out the untrained. That it's often the more experienced person who tends to make the error.

We have not found weak training for an engineer to be at the heart of the accidents we have investigated over the 3 years. I found one accident in 3 years where I felt a training deficiency contributed to the accident.

Senator LAUTENBERG. Do I detect from your answer that you don't support federal licensing, Mr. Riley?

Mr. Riley. Senator, you are not detecting opposition. We have never looked at the issue because we didn't have the authority to do it even if we wanted to.

It's my gut feel the question you have to ask is, does the safety margin created by what you learn in licensing justify the creation of the program?

What I am telling you is, as I have thought about that I haven't been able to put my finger on what we get from licensing.

That is not a close-minded position. If we had the authority, I think the issue has been raised enough we ought to do a proceeding or rulemaking on it and see what the experts have to say.

Senator Lautenberg. Thank you, very much, Mr. Riley, and your colleagues.

Mr. Riley. Thank you, sir.

Senator Lautenberg. Excellent testimony.

Mr. Riley. We will continue to work with you.

NONDEPARTMENTAL WITNESSES

STATEMENTS OF:

EUGENE PLOURD, ASSISTANT ADMINISTRATOR, UNITED TRANSPORTATION UNION

DON LINDSEY, VICE PRESIDENT, NATIONAL LEGISLATIVE REPRESENTATIVE, BROTHERHOOD OF LOCOMOTIVE ENGINEERS

JOHN WOISCHKE, LEGISLATIVE LIAISON, BROTHERHOOD OF LOCOMOTIVE ENGINEERS

ACCOMPANIED BY LAWRENCE MANN, ATTORNEY, RAILWAY LABOR EXECUTIVES ASSOCIATION

INTRODUCTION OF WITNESSES

Senator LAUTENBERG. Next we would like to hear Mr. Jim Snyder, chairman of the safety committee of RLEA. Is Jim here? I didn't see him.

Is there someone appearing for the Rail Labor Executives Association?

Mr. Lindsey?

Mr. LINDSEY. Right here, sir.

Senator LAUTENBERG. You are vice president of the Brotherhood of Locomotive Engineers. I would ask that you introduce yourselves please quickly, and we will get on with a statement by whomever the leader of the group is intended to be.

Mr. PLOURD. I am Gene Plourd, Mr. Snyder's administrative staff assistant in the Washington office.

He is out today. He had some minor surgery and is still in the hospital.

With me is Mr. Don Lindsey, national representative for the Brotherhood of Locomotive Engineers. Mr. John Woischke, legislative liaison for the Brotherhood of Locomotive Engineers on my right. To my left is Mr. Larry Mann.

We have two formal statements today, Mr. Chairman. One from the Rail Labor Executives Association——

Senator LAUTENBERG. Would you bring the microphone closer to you?

Mr. PLOURD. Certainly. And one from the Brotherhood of Locomotive Engineers.

Senator LAUTENBERG. We invite you to summarize if you can, each of you. We will try to get to the questions as quickly as we can.

We will take your full statement for the record.

UNITED TRANSPORTATION UNION

Mr. Plourd. Thank you, Mr. Chairman. I will summarize as briefly as I can with our statement.

We realize the Conrail accident in Chase, Md., is paramount on your minds now in considering whether that accident could have been prevented by better utilization of funds appropriated for railroad safety in the Northeast corridor.

The issues arising out of that accident highlight a number of problems facing those of us who, with your help over the years, have vigorously sought safe railroad transportation.

I will attempt to deal with some of these issues in this testimony.

Railway labor yields to no one in its endeavor to improve safe railroad operations: The surrounding factors of the accident demonstrate that the Federal Railroad Administration continues to do nothing much more than public relations.

Vigorous enforcement is needed on a continuing basis, not only after a catastrophic result. We are particularly pleased with the first two recommendations by the NTSB, resulting from its investigation of the accident.

The first recommendation is that all locomotives on the Northeast corridor be equipped with an automatic train control device which will control the speed of the train automatically and stop the train in restricted territory if the engineer fails to respond to a signal.

The RLEA vigorously opposed the removal by Conrail of these protective devices in the mid-1970's. However, the FRA gave approval to Conrail. The second Board recommendation is the requirement of operable radios capable of train-to-train and train-to-fixed-station communications. As we noted, none of the radios on all three of those locomotives were operable at the time prior to the accident or after. I understand the engineer was issued a hand-held radio, which is inferior.

DRUG AND ALCOHOL ABUSE

Concerning the alcohol and drug abuse problem, we will expand on that by one of the other witnesses here today, what we call Operation Red Block. This is on numerous railroads in the country and has been recognized by both the employees and employers.

I am not sure it's a greater problem than it is in other industries, but we recognize it is a problem.

With Operation Red Block there is a program established whereby the employees who do have this problem can get help without losing their job. They would be suspended for a period of time while going through this type of thing.

Now, they do have in Operation Red Block as I understand—Conrail does not have a program, nor does Amtrak in Operation Red Block.

One of the other problems, and I am not trying to disassociate ourselves in any way from this problem, but I think there are a lot of other problems as far as safety is concerned, we should be addressing today.

The accident raises also the question of whether false signals can occur. If so, what is the safety protection that should be built in to prevent catastrophe?

Last year there were 240 false signal clear signals in the United States which could have resulted in similar accidents. On Amtrak alone there were nine false proceed signals.

In the Northeast corridor, because of the heavy rail traffic, all locomotives should be equipped with automatic stop devices. Such equipment would cause a train to stop automatically if it passes a restrictive signal.

The Conrail locomotive was not equipped with such a lifesaving device. This is an example of a nationwide problem.

Trains regularly are not being inspected by qualified employees, I know you brought that question out a little earlier in the day. We will expand on that if you desire.

Senator LAUTENBERG. Repeat that.

INSPECTIONS

Mr. PLOURD. Trains regularly are not being inspected by qualified employees in many instances.

I think this was brought out earlier where train crews are required in many locations to do the train inspection.

Senator LAUTENBERG. Are they not qualified?

Mr. PLOURD. They are not qualified as inspectors, trained inspectors.

Design problems inside the Amtrak cars are another problem. In 1984 FRA conducted hearings on safety of passenger cars. At those hearings we presented a number of recommendations, some proposed by NTSB to FRA. I have attached a copy of my testimony for your information. As of this time FRA still has not issued rules to require a safe interior for passenger cars.

FRA consistently provides your committee with figures and charts on railroad safety. In some cases we feel the administrator has misled you.

He fails to inform you 10 percent of the employees are injured each year. There are over 1,000 total rail-related fatalities annually, close to 7,000 highway grade crossing accidents.

In addition, there are more than 3,000 train accidents not at crossings and nearly 30,000 incidences resulting in injuries and causing over 500 fatalities.

The question Congress and the public must face, do these statistics reflect the acceptable level of safety on the nation's railroads?

The death and injuries are not just statistics. We reject any suggestion the statistics could not be cut in half by vigorous enforcement by FRA.

Common sense dictates the carriers no longer have any incentive to comply with the regulations. It simply can't wait until the FRA inspector happens to discover a defect and then make necessary repairs. Moreover, the safety inspectors are spread so thin it's virtually impossible for them to follow up defects for many weeks.

Just to give you a point of some of the statistics that are here, under hazardous material, defects discovered of hazardous materials, 10,268. Violation reports were 238, percentage of 2.3 percent of those discovered.

PREPARED STATEMENT

Senator LAUTENBERG. We are running out of time here. I wonder if you have a single point or two to make, otherwise we will, we have your full testimony which will go into the record.

Mr. PLOURD. I think one of the points that should be made, to get away from the testimony a little bit, was it seems to be implied somewhat that railroad employees quite often are out there and do whatever they have to do to impede or impair devices such as the whistle that was there and those type of things.

But I think there is a silence out there concerning some of the problems the railroad employees have. To give you a brief example——

Senator LAUTENBERG. We will bring that out in the questions. I will give you an opportunity to air that fully, because I am inclined to agree what we heard is not the full story before us.

[The statement follows:]

STATEMENT OF J.R. SNYDER, NATIONAL LEGISLATIVE DIRECTOR, UNITED TRANSPORTATION UNION

My name is J. R. Snyder. I am the National Legislative Director of the United Transportation Union. I am appearing today as Chairman of the Safety Committee of the Railway Labor Executives' Association. Accompanying me is Lawrence M. Mann, attorney for RLEA in this matter. The RLEA represents all the crafts of the railroad workers in this country, and the names of the constituent organizations are as follows:

American Railway & Airway Supervisors' Association,
   Division of BRAC
American Train Dispatchers Association
Brotherhood of Locomotive Engineers
Brotherhood of Maintenance of Way Employees
Brotherhood of Railroad Signalmen
Brotherhood of Railway, Airline, Steamship Clerks,
Freight Handlers, Express and Station Employees
Brotherhood of Railway Carmen of the United States
and Canada
Hotel Employees and Restaurant Employees
International Union
International Association of Machinists and
Aerospace Workers
International Brotherhood of Boilermakers, Iron
Ship Builders, Blacksmiths, Forgers and Helpers
International Brotherhood of Electrical Workers
International Brotherhood of Firemen and Oilers
International Longshoremen's Association
National Marine Engineers' Beneficial Association
Railroad Yardmasters of America
Seafarers' International Union of North America
Sheet Metal Workers' International Association
Transport Workers Union of America
United Transportation Union

THE RECENT AMTRAK/CONRAIL COLLISION AT CHASE, MARYLAND

We realize that the Conrail/Accident at Essex, Maryland is paramount in your minds now in considering whether that accident could have been prevented by better utilization of funds appropriated for railroad safety and the Northeast Corridor. The issues arising out of that accident highlight a number of problems facing those of us who, with your help over the years, have vigorously sought safe railroad transportation. I will attempt to deal with some of these issues in this testimony. Railway labor yields to no one in its endeavor to improve safe railroad operations.

The surrounding factors of the accident demonstrate that the Federal Railroad Administration continues to do nothing much more than public relations. Vigorous enforcement is needed on a continuing basis, not only after a catastrophe results.

We are particularly pleased with the first two recommendations by the NTSB, resulting from its investigation of the accident. The first recommendation is that all locomotives on the northeast corridor be equipped with an automatic train control device which will control the speed of the train automatically and stop the train in restricted territory if the engineer fails to respond to a signal. The RLEA vigorously opposed the removal by Conrail of these protective devices in the mid-1970's. However, the FRA gave approval to Conrail. The second Board recommendation is the requirement of operable radios capable of train-to-train and train-to-fixed station communications. Operable radios are a long standing problem not only on the northeast corridor, but throughout the country. This is another area where FRA has shut its eyes and let the railroads use defective and inoperative radio equipment in all phases of operations. RLEA has tried without success for years to correct this serious safety issue. Unfortunately, the accident raises the issue of whether alcohol or drugs is a cause of this accident. It is very disheartening to rail labor who has worked many years in an attempt to rid the workplace of all alcohol and drugs. Upon analysis by our experts, there is nothing in the test results to suggest either Conrail employee was impaired by drugs. However, if Conrail had in place operation Redblock, which has been so successful on the Union Pacific, the Chessie System and other railroads, these individuals could have received counseling and rehabilitation assistance. I am attaching a copy of a pamphlet describing the benefits of the Red block program. Since being put in operation by the Chessie System and the Union Pacific, overall accidents have been decreased. It has shown to be an effective cooperative program to which the employees respond.

The accident also raises the question of whether false signals can occur. If so, what safety protections should be built in to prevent a catastrophe. Last year there were 240 false clear signals in the U.S., which could have resulted in similar accidents. On Amtrak alone there were 9 false proceed signals. In the Northeast Corridor, because of the heavy rail traffic, all locomotives should be equipped with automatic stopping devices. Such equipment would cause a train to stop automatically if it passes a restrictive signal. The Conrail locomotive was not equipped with such a lifesaving device.

The alleged safety defects inside the Conrail locomotive is an example of a nationwide problem. Trains regularly are not being inspected by qualified employees. Rather, many railroads, including Conrail, are requiring operating crews, who are not adequately trained, to make the detailed initial terminal tests and inspections. Last year, the House unanimously passed a provision which would correct the dangerous practice by requiring all such tests and inspections to be performed by qualified employees who had been properly trained. The Senate took no action on the legislation.

The design problems inside the Amtrak cars is another concern of which your Committee should be aware. On May 29, 1984, the FRA conducted hearings on the safety of passenger cars. At those hearings we presented a number of recommendations (some proposed also by the NTSB) to FRA. I am attaching a copy of my testimony for your information. As of this time, FRA still has not issued rules to require a safe interior in passenger cars.

Now, I would like to summarize some major rail safety problems in the country and offer some suggestions on how your Committee may be of assistance in correcting them.

STATISTICS

The FRA Administrator consistently provides your Committee with figures and charts on railroad safety. In some cases, we feel the Administrator has misled you. He fails to inform you that 10% of the employees are injured each year. There are over 1,000 total rail related fatalities annually and close to 7,000 rail highway grade crossing accidents. In addition, there are more than 3,000 train accidents not at crossings and nearly 30,000 incidents most resulting in injuries and causing over 500 fatalities.

The question Congress and the public must face--do these statistics reflect an acceptable level of safety on the nation's railroads. The deaths and injuries are not just statistics to RLEA. We reject any suggestion that these statistics could not be cut in half by vigilant enforcement by FRA. The FRA can take no credit for any statistical improvements over prior years because the agency really cannot show any positive enforcement effort. As pointed out to you in previous testimony, in 1982 the FRA implemented a System Safety Plan whereby safety violations discovered by the FRA inspectors would not be subject to citations and penalties as required by all the Federal railroad safety laws. We continue to be outraged at the way FRA administers the safety laws under the Plan. Only if the defect is not corrected within a time set by the inspector will the FRA consider it to be a penalty. Common sense dictates that the carriers no longer have any incentive to comply with the regulations. They simply can wait until a FRA inspector happens to discover a defect, and then make necessary repairs. Moreover, the safety inspectors are spread so thin throughout the country it is virtually impossible for them to follow-up defects for many weeks.

The results of FRA's enforcement activity in 1985 under this so-called System Safety Plan demonstrates the effect of that policy. Very few cases ever are processed for violations by FRA. The sweetheart arrangement between FRA and the railroads must end. We think this borders on criminal neglect and an investigation should be required by Congress. The 1985 enforcement efforts are shown below:

	Track	Hazardous Materials	Signal	Motive Power and Equipment	Operating Practices
Defects Discovered	107,587	10,268	9,477	150,979	3,134
Violation Reports	159	238	86	3,104	1,513
Percent	.15	2.3	.91	2	48

We have not been provided with the 1986 figures, but consistently the results are similar. I am attaching as an exhibit to my testimony a comparison of the enforcement statistics of FRA between 1979-1985.

Furthermore, the FRA is turning its collective head to increasingly widespread failures by the railroads to report accidents and incidents as required by law. RLEA has little confidence in the validity of the statistical data base. We have knowledge of many cases where the railroads simply keep injured employees on the payroll and do not report the accident or incident. Other situations involve blatant non-reporting even though the accident or incident is obvious.

A related issue is the continuing problem that the railroads do not identify the proper causes of accidents/incidents. We have brought this to FRA's attention many times but the FRA has done nothing to assure validity of the statistical information it receives from the railroads. Human error has been designated by the railroads on the accident reports as causing approximately 25% of the railroad accidents. There have been no systematic analysis of such accidents by FRA. The underlying causes should be determined so that appropriate measures can be taken to correct such errors if indeed human error caused a particular accident.

We urge your Committee to direct an independent investigation of the entire accident reporting procedures. Possibly the Office of Technology Assessment or the General Accounting Office could be authorized to conduct the review.

INSPECTION FORCE

On the whole the FRA safety inspectors are competent and hard working. However, because of instructions from the Regional directors and the Washington officials, inspectors are not performing the duties demanded of their jobs. Also, in many cases their responsibilities are so broad that they cannot cover their complete territories. Nearly one-half of the Federal inspectors are generally unable or never able to cover their territories. Some inspectors pointed out to the GAO that it would take them three to five years to cover their territories, and others acknowledge that some major facilities and inspection points had not been inspected by FRA in years.

Last year you appropriated funds for 315 safety inspectors, exclusive of supervisors. They are classified as follows: 100 motive power and equipment, 54 operating practices, 88 track, 33 signal and train control, and 30 hazardous materials. Each category has been reduced in number since 1984. With that staff FRA is required to inspect approximately 265,000 miles of track, 23,000 locomotives, 1.4 million freight cars and 120,000 miles of signal systems.

EMPLOYEE FATIGUE

Studies are replete with showing the direct relationship between long hours, fatigue and the potential for accidents. As I pointed out, the railroads attribute employee error with a high percentage of the causes of accidents. However, no direct information is required by FRA to determine in each accident how many hours the particular employees had worked during the previous 7 days. We feel that this is a critical issue in the locomotive where employees are being exposed to continuous noise, vibration, continued motion, heat and, in many cases, operating defective equipment.

During the last Congress we recommended to your Committee that research funds be earmarked to analyze these factors of rest and stress in accidents possibly involving employee error. We again seek your assistance in providing the necessary funds for such a study.

RESEARCH AND DEVELOPMENT

RLEA does not think that the research and development funds are being wisely spent by FRA. The money is not being directed to the areas which are causing the greatest numbers of injuries or deaths. Most of the research money has been spent on equipment and track research. We question why highway grade crossing accidents have received so little attention. In 1985, Congress approved $200,000 to support cooperative efforts to reduce accidents at grade crossings. This was again included in the FY 87 appropriation. Nevertheless, none of the FRA's specifically funded research projects in the past several years related to highway grade crossings. Overwhelmingly more accidents, deaths and injuries occur at crossings than anywhere else on the railroads. The FRA did hold public hearings in 1985 on grade crossings, published a report, and initiated a few demonstration projects. These actions are to be applauded. However, those initiatives by DOT are nothing but window dressing. An in-depth study should be undertaken to determine why each collision occurred. This at a minimum should include interviews of each driver of the motor vehicle involved and each crew member in the locomotive. Only by a systematic and comprehensive analysis of these accidents will there be a better understanding of why the vehicles proceeded into the path of a train, and insight provided as to how to reduce this unnecessary slaughter of humans at crossings.

Also, we have already mentioned the matter of employee error, which needs in-depth study. Hopefully, an appropriation by you for railroad safety will require research into these two areas that I have mentioned.

INVOLVEMENT OF THE STATES

At every opportunity the FRA attempts to eliminate the various States' participation in railroad safety. The involvement of the States is extremely important in helping to improve safety. There are 31 states participating in safety inspection and they have invested substantial time and effort in establishing an effective program. If FRA's attitude in dealing with the States was not so uncooperative, significant assistance could be obtained to help assure that the railroads comply with the laws and regulations.

CONCLUSION

As always, we appreciate the opportunity to provide you with our views on how railroad safety can be improved. The challenge is one all of us share and we hope your assistance will be such that FRA and the railroads will finally recognize the seriousness of these safety problems which exist on our nation's railroads.

STATEMENT OF J.R. SNYDER BEFORE FEDERAL RAILROAD ADMINISTRATION'S SPECIAL SAFETY INQUIRY FOR RAIL PASSENGER EQUIPMENT, MAY 29, 1984

My name is J. R. Snyder. I am the National Legislative Director for the United Transportation Union. Today I am appearing as Chairman of the Safety Committee of the Railway Labor Executives Association (RLEA). Accompanying me is Lawrence M. Mann, attorney for RLEA in this matter.

RLEA submits there are many passenger car regulations which are needed. In general, these are in the areas of emergencies, maintenance and design, and environmental protection.

The biggest complaint by our members is that the passenger equipment is not being safely maintained. Also, FRA must address the problems of what measures need to be taken to prevent injuries and death in an emergency. In this connection the crashworthiness of certain types of passenger cars must be analyzed.

Some of the carriers have taken the position that there are too many different kinds of equipment for FRA to impose uniform standards. Such argument has no merit. The basic standards would be minimum requirements to help assure safety of the employees and the public. Where peculiarities of equipment make it impossible for the railroad to comply, a waiver may be sought.

I. Emergencies

With respect to responses during emergencies, many improvements are needed. Too many injuries have occurred because passengers were not informed about procedures to follow during an emergency. Unlike airlines, whenever a train departs the terminal, many railroads do not provide information to passengers such as pointing out the exits, or what steps to take in case of the unlikely event of a derailment, collision or other mishap. The crews on passenger service are not adequately informed on emergency procedures.

We are aware that Amtrak has instituted a briefing program that requires attendants in sleeping cars to advise passengers of special training in handling emergencies and to inform passengers that the attendants are available for questions about procedures and locations of exit doors, emergency windows, etc. We see no valid reason why passengers in trains do not receive the equivalent safety information as do airline passengers.

The Seabrook, Md. accident June 9, '78 highlighted another safety deficiency. There was no indentification of the emergency mechanism for opening the side doors of the Conrail cars.

Accidents occurring at night provide a further concern in derailments or collisions. There are no emergency lighting standby power sources on many trains, nor communications facilities. The NTSB has made several recommendations for such requirements.

The failure to have all cars and passenger compartments equipped with emergency windows is a further area of great concern. This need was highlighted in the June 23, 1982 Amtrak derailment at Gibson, California. That accident also shows the need for smoke detectors and alarm systems in certain emergency situations.

Our members inform us that the location of first aid equipment is not known by the passengers, nor by the crews on some trains. Also, the emergency equipment should be clearly labeled and painted a uniform color for easy indentification.

II. Maintenance And Design

A. Doors.

The doors on various types of cars have been a prime source of safety problems. One horrible example occurred in 1974 on a Long Island Railroad commuter train. A passenger, while attempting to exit a standing train, was trapped between two sliding doors as they closed. The doors caught the man's ankle and the train started. The passenger was dragged approximately 180 feet and was electrocuted in the process when he contacted the third rail. A train under no circumstances should be able to move when anything is caught between the doors.

The emergency release mechaninisms for doors are not identified on some railroads so that the doors can be opened easily by passengers in an emergency. In addition, operating instructions should be clearly marked and there should be a means for emergency personnel to open car doors from the outside.

On Amtrak cars there is a continual failure of the electrical system for end doors, and the door recess into the car body makes the opening of doors difficult, particularly when there has been an accummulation of snow. Also, on Amtrak the position of electric controls on the outside of cars, instead of inside, prevents access when a train is in motion.

B. Radios and Other Communications Equipment.

The FRA has been apprised of the need for operable radios on trains many times not only by rail labor, but the NTSB as well. An Amtrak collision on April 20, 1979, at Edison, New Jersey, points out the obvious hazards involved. As a result of the accident the NTSB recommended operable radios be required on all trains (Recommendation R-79-73).

C. Speed Indicators.

Speed indicators on passenger trains have been recommended in the past by rail labor as well as the NTSB (see NTSB Recommendation R-76-32 issued July 30, 1976). The reasons are obvious -- to help assure a train does not exceed speed restrictions. Many accidents have been attributable to excessive speed under the circumstances (See e.g. NTSB Rept. Nos. RAR-77-4; RAR-73-5).

D. Crashworthiness.

There is an urgent need to determine the crashworthiness of all passenger equipement. Safe standards are necessary to help protect passengers from the hazards of a collision. It is technically feasible to design cars to withstand collisions at moderate speeds without passengers suffering fatal injuries. The problem is FRA's reluctance to responsible address the issue. A number of NTSB reports deal with this problem (See e.g. NTSB Rept. Nos. RAR-74-5 and RAR-76-7).

E. Protection for Passenger Inside Cars.

The problem of protecting passengers from being injured by hazards inside the cars has been brought to FRA's attention on numerous occasions. The Seabrook, Maryland, accident in 1978, was one example. There, passengers on one of the trains were injured by being propelled into seat backs which collapsed, and onto unpadded metal strips bordering the tops and sides of seats. Passengers on the other train suffered injuries when the seats rotated because of defective locking mechanisms. Moreover, the seats had not been given any service maintenance.

Included in the above are also problems of passengers being injured or killed by being thrown through large windows. While some railroads have voluntarily corrected the problem, others have ignored it. FRA has a duty to assure the safety of passengers, and cannot continue to sit by idly while these hazards continue to go uncorrected.

F. Repairs.

It is particularly appalling to rail labor that whenever car inspectors find defects, many supervisors prevent the needed repairs from being performed. The practices on the Long Island Railroad are particularly bad. We have numerous complaints from car inspectors that the foremen regularly require them to put defective cars back into service. Another type of problem exists at Mobile, Alabama. The Amtrak has hired non-qualified persons to perform the repairs on its cars. It is necessary that FRA set a minimum qualification standards for all persons performing repair and maintenance work.

III. Environmental Type Protection.

a. Toilets

One of the most disturbing passenger car problems is the inspection and maintenance of toilet facilities. There is no reason why the sanitary conditions on railroads cannot equal those on airlines. At every terminal the airlines inspect and clean the toilets on the planes. Railroads, on the other hand are not consistent in maintaining good sanitary conditions.

b. Toxic materials.

It is a must that nonflammable characteristics of the transformers on passenger cars and locomotives be maintained because of the fire danger to passengers and crews. In addition, the possibility of toxic gases caused by incomplete combustion will create extremely toxic materials and vapors, such as dioxins. No transormer fluid should be used that does not have the same fire retardent capability as PCB. Therefore, we recommend that a regulation require that fluids for railroad transformers be no fire point fluids.

In conclusion, we urge FRA to comply with the Congressional mandate to impose reasonable standards for passenger trains.

ENFORCEMENT STATISTICS OF FRA BETWEEN 1979–85

April 9, 1986

INSPECTION DATA

	1979	1980	1981	1982	1983	1984	1985
Track:							
Number of inspections	7,500	10,256	14,052	15,087	17,166	17,387	19,679
Miles inspected	146,000	203,478	201,121	275,560	378,169	385,413	407,883
Records inspected	141,000	184,526	193,632	267,271	195,832	217,271	257,686
Defects recorded	101,000	116,123	129,458	141,157	104,458	97,706	107,587
Violation reports filed	370	315	292	60	66	129	159
Signal:							
Number of inspections	3,800	3,834	3,030	4,086	4,589	4,417	4,236
Units inspected	24,900	18,227	14,786	47,568	55,038	56,435	51,162
Records inspected	65,000	59,659	48,788	52,849	61,403	50,445	68,888
Defects recorded	9,900	9,588	3,614	8,729	9,906	10,300	9,477
Violation reports filed	300	290	86	62	74	83	86
Motive power and equipment:							
Number of inspections	12,000	16,409	19,758	19,353	21,543	21,571	21,750
Locomotives inspected	22,000	31,416	37,125	35,735	37,914	37,618	32,492
Cars inspected	380,000	683,040	805,369	913,278	1,042,106	1,042,260	997,620
Defects recorded	**	**	**	171,320	164,452	168,644	150,979
Violations filed	3,500	4,826	3,843	1,630	1,732	2,721	3,104
Operating practices:							
Number of inspections	3,070	3,465	10,440	7,533	10,593	13,118	12,599
Complaints received	657	662	290	302	261	329	238
Defects recorded	**	**	**	1,993	2,261	3,026	3,134
Violations filed	**	171	670	105	360	558	1,513
Hazardous Materials:							
Number of inspections	2,600	3,268	3,268	4,859	6,475	8,615	8,471
Tank cars inspected	15,900	19,010	26,580	52,175	42,071	53,881	60,265
Defects recorded	**	**	**	**	8,745	9,979	10,268
Violations settled	313	375	181	105	154	314	282
Settlement amount	$636,000	$986,770	$314,850	$277,300	$314,475	$491,150	$469,658

** FRA did not computerize this data until 1983, therefore, figures are not available.

SUMMARY OF VARIOUS PROBLEMS RAIL LABOR HAS ENCOUNTERED WITH REGARD TO RAILROAD SAFETY, SEPTEMBER 4, 1985

HISTORIAL PERSPECTIVE

The enactment of the Federal Railroad Safety Act of 1970 was the first major statutory revision of railroad safety and was the catalyst for overall federal authority in railroad safety. However, the FRA has been criticized by many sources, the workers, Congress and independent agencies for its poor job of administering railroad safety. After enactment of the 1970 law, the FRA refused to adopt regulations within one year from date of enactment as required by the statute. Not until late 1973 did FRA finally promulgate a rule (H.R.Rep.No.93-1083,93 Cong.2d Sess.at p.9 (1974). The FRA has consistently thrown roadblocks in the state participation provisions in the Safety Act. FRA did not show any intent to initiate the state program until after Congressional hearings on the issue were scheduled in 1974. In response to Section 203 of the Rail Safety Improvement Act of 1974, FRA contracted with Arthur Young & Co. (a Washington, D.C. consulting firm) to conduct a study of FRA's existing rail safety enforcement and inspection programs. We had serious reservations concerning the objectivity of that study because FRA chose the company it desired to review the agency's enforcement. Obviously, the Arthur Young Company would be as kind as possible to its employer. The results of that study precipitated four basic findings. These findings were cited by RLEA in its written statement in response to FRA Docket No. RSSI-78-5. We refer the Task Force to that Docket for RLEA's analysis of that study.

1. The consultants' report stated that "both headquarters and regional personnel generally operate in a response mode rather than taking an active role in determining program direction".
2. The consultants found a general lack of assigned or understood accountability for performance at all levels. Many of the FRA components were performing functions not assigned to them and, and in some cases, these functions were not even related to the component's place in the organizational structure.
3. FRA should not and could not supervise a carrier's quality control. The report noted that, in reality "non-compliance may be more the rule than the exception". Contributing to this problem, according to the report is the inadequacy of existing sanctions which do not appear to motivate compliance.

4. The state inspection program in most areas does not complement the FRA program, suggesting that there were inadequate means available to assure that the state activities were consistent in terms of quality coverage and enforcement with other states or with those of FRA.

In 1975 Congressional dissatisfaction with FRA was evident (See H.R.Rept.No.94-240,94th Cong., 1st Sess.at p.5(1975). The House Committee on Interstate and Foreign Commerce stated:

> "The Committee feels that these statistics are telling the story that the Federal Railroad Administration (FRA) is not doing its job adequately. The Committee also feels that a major reason for this problem is that the FRA has consistently failed to avail itself of the safety inspectors and funds authorized by this Committee...."

FRA's lack of concern for safety led Congress in 1976 to enact several amendments which were designed to put some teeth into FRA's enforcement. The FRA had been compromising penalties substantially below the minimum penalties required by the safety laws. In response Congress mandated that penalties could not be compromise below the penalty as assessed originally. Also the Secretary was required by Congress to decide any petition filed within one year from its receipt. Many times rail labor would submit petitions that would be pending at FRA for years without a response from the agency. Even today it usually takes many months for a response to a simple letter. The myriad of problems with FRA caused Congress to request that the Office of Technology Assessment to evaluate the Federal railroad safety program. The OTA completed its study in 1978. In general the study concluded that FRA had failed to set safety goals and had been unable to implement its enforcement authori effectively. In particular, data collection was found to be piecemeal and inadequate; inspections did not correlate with demonstrate needs for a decrease in accidents; regulations did not appropriately set forth performance standards; and penalties were not being assessed in a rational manner. The state participation program was not being administered effectively as indicated by the small number of states involved. (See Sen.Rep.No.96-785,96th Cong.2d Sess.at p. (1980).

In 1978 the Administrator of the FRA, testifying before the House and Senate admitted that the railroad safety program had worsened instead of diminished since the passage of the Federal Railroad Safety Act (See Hearings Before the Subcommittee on Transportation and Commerce of the House Committee on Interstate and Foreign Commerce on H.R.10556 95th Cong.,2d.Sess.87-89(March 15 and 16, 1978). The problem with FRA caused nine members of the House Committee on Interstate and Foreign Commerce to file "Separat Views on FRA's Lack of Attention to Railroad Safety" (H.R.Rep.No.95 1176,95th Cong.2d Sess. at pp.16-20 (1978). We submit that the repo should be read by the Task Force in order to gain a better perspectiv the rail safety problems. The members identified what it considere to be the greatest single problem in rail safety today:

> "...the failure and apparent refusal of the Federal Railroad Administration (FRA) to enforce the Federal rail safety statutes in the agressive manner intended by Congress. We believe that definitive Congressional action is essential to force FRA to abandon its passive role in rail safety and to begin the agressive enforcement program which is obviously necessary to stem the growing tide of railroad accidents, injuries and fatalties." Id.at p.16.

Also it was pointed out that FRA's failure to enforce the Federal railroad safety laws has been paralled by an alarming increase in rail accidents. The nine members called for definitive action by Congress in three areas. First, Congress should seek ways to force FRA to initiate an agressive program of enforcing Federal safety statutes and regulations. Secondly, an appropriation should not be limited to amounts FRA requests. Third, in view of FRA's failures, the various states should be given greater authority over rail safety.

In December, 1981 the DOT submitted a report to Congress entitled "Department of Transportation Systems Safety Plan for Improving the Management of Railroad Safety Programs". The Systen Safety Plan was a codification of the manner in which FRA decided to administer its rail safety program. Its focus was directed away from fines for violations to other types of remedies. This Plan has been critized by various interest groups. The Comptroller General was one of the critics in a report entitled "The Federal Approach to Rail Safety Inspection and Enforcement: Time for Change". The GAO's report notes that internal legal memoranda from the FRA's

Chief Counsel's office admit that the enforcement policies in the System Safety Plan exceed FRA's relatively narrow prosecutorial discretion. The Comptroller General in a letter dated December 21, 1982 to the House Subcommitee on Energy and Commerce, stated that the imposition of civil penalties for safety violations is central to the enforcement scheme of the various railroad safety laws, and that the Plan is questionable from a legal standpoint. The Comptroller General said that the FRA inspectors may well interpret the Plan as a signal to generally avoid citing violation in a wide range of circumstances. That, of course, is exactly what is happening today. In summary, the GAO stated that the Plan exceeded FRA's legal authority, but that has not deterred the FRA.

STATISTICS

We are unhappy to report that in every major safety category the statistics have become worse since last year. The category of rail-highway crossing accidents more directly affect the general public than other categories. The chart compares the accident statistics at public and private crossings during 1983 vs. 1984.

	ALL ACCIDENTS	FATALITIES	INJURIES
1984	7,281	649	2,910
1983	7,161	575	2,623

The overall statistics covering accidents (incidents excluded) and deaths during 1983 vs. 1984 are close. There were approximately 3,800 accidents in both years. In 1983 there were 50 deaths and in 1984, 63 person died in accidents. Injuries in 1984 nearly doubled. There were 893 injuries sustained in accidents during 1984 as compared with 502 injuries in 1983.

In understanding the figures supplied by FRA it is necessary to distinguish accidents from incidents. Accidents are defined as a collision, derailment, or other event involving the operation of railroad on-track equipment resulting in physical property damages that exceed $4,900.00 for the 1985-1986 period. The threshold figure established by FRA during 1983-1984 was $4,500.00. The key to classifying an event as an accident is how much property damage was involved.

A train incident is an event involving the movement of railroad on-track equipment that results in a death, a reportable injury, or a reportable illness, but in which railroad property damage does not exceed $4,900.00. A non-train incident in an event arising out of railroad operations but not from the movement of on-track equipment, which does not exceed $4,900.00 in property damage, and results in a death, a reportable injury or a reportable occupational illness.

The train incident statistics need to be included for a complete representation of what's happening in rail safety. The chart below gives those figures for 1983 vs. 1984.

TRAIN INCIDENTS

	TRAIN INCIDENTS	DEATHS	INJURIES
1984	6,126	515	5,528
1983	5,679	432	5,182

Any way the FRA and the railroads attempt to twist the figures, the bottom line is still the same---safety was much poorer in 1984 than in 1983.

The logical question to be posed by the Task Force is why have the safety statistics worsened in 1984? The answer is obvious to the rail workers who operate every train, perform all of the inspections when allowed by railroad management, and observe on a 24-hour basis 7 days a week what is happening. The FRA does not do its job in assuring that the railroads comply with the safety laws adopted by Congress and the implementin regulations. There are few incentives for railroads to comply. I the first place equipment may not be inspected even once a year by the FRA. Under the FRA's policies, even if a defect is discovered by a FRA inspection, the railroad is first given a chanc to correct the violation. If the railroad still does not correct the defect, then only will FRA take action. The word "action" is used in its broadest terms because there is a slim chance FRA will impose a fine. For example, in 1984 the FRA inspectors discovered 53,317 defects of the freight car standards and FRA sought fines in only 896 reports. Furthermore, the fines are compromised under the Federal Claims Collection Act. It is clea to anyone having knowledge in rail safety that FRA's enforcemen is a sham.

Another chart may be informative to The Task Force in its deliberations. The chart compares the defects discovered versu the violation reports filed in 1984.

I. CARS

Freight Car Standards

Cars Inspected	Defects	Viol. Rpts.
1,031,644	53,317	896

II. Safety Appliances

Defects	Viol. Rpts.
46,937	(1583)*

III. Power Brake

Defects	Viol. Rpts.
42,712	(1583)*

*The violation reports for safety appliances and the power br defects are combined by the FRA.

IV. LOCOMOTIVES

Locomotives Inspected	Defects	Violation Reports
37,123	24,495	240

V. TRACK

Miles Inspected	Defects Recorded	Violation Reports
334,095	88,041	129

VI. SIGNAL

Miles Inspected	Defects Recorded	Violation Reports
22,611	8,534	83

SYSTEM SAFETY PLAN

As pointed out previously, in 1982 the FRA implemented a System Safety Plan whereby safety violations discovered by the FRA inspectors would not be subject to citations and penalties as required by all the Federal railroad safety laws. We continue to be outraged at the way FRA administers the safety laws under the Plan. Only if the defect is not corrected within a time set by the inspector will the FRA consider it to be a penalty. Common sense dictates that the carriers no longer have any incentive to comply with the regulations. They simply can wait until a FRA inspector happens to discover a defect, and then make necessary repairs. Moreover, the safety inspectors are spread so thin throughout the country it is virtually impossible for them to follow-up on defects for many weeks.[1/]

The results of FRA's enforcement activity last year under this so called System Safety Plan demonstrates the effect of that policy. There were approximately 286,771 defects discovered by FRA's inspectors which were forwarded to Washington for enforcement. However, only in approximately 13,000 cases did FRA seek to impose a fine, which covers less than 4% of the defects discovered.

There are numerous situations which demand scrutiny of FRA's enforcement activities. I will mention a few so that you will better understand our frustrations. In many cases the violations have resulted in injuries and deaths.

END OF TRAIN DEVICES

On trains without cabooses some railroads utilize a battery operated telemetry device for measuring brake pipe pressure. The device also has a light attached for purposes of satisfying the requirements of the warning lighted marker on the

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[1/] In September, 1977 the FRA issued another "System Safety Plan" which was a 5 year strategy for attacking safety problems. On page 183, the FRA said that a total of 800 safety personnel would be needed to eliminate the train accident rate increase. In 1985 there are only 325 safety inspectors on board.

rear of trains. The batteries used by the railroads rarely stay charged and thereby fail to keep the lights in working condition during most trips. The United Transportation Union filed over 3,500 complaints in 1984 alone, and FRA has done nothing to require the railroads to comply, much less impose fines for the many violations.

Sleeping Quarters

In 1976 Congress enacted an amendment to the Hours of Service Act which prohibited the railroads from providing sleeping quarters within the immediate vicinity of humping and switching operations in rail yards. The statute was designed so as to permit the carriers to phase out the existing sleeping quarters which were located inside the yards. Very little has been done in the eight years by the railroads to remove the sleeping quarters away from the yards. Because of the limitations on major reconstruction, the sleeping quarters inside the yards generally have been left in disrepair. It is time, once and for all, for the rail industry to recognize that rail workers are human beings and deserve places to sleep that are safe, quiet, clean, and sanitary. A notable example is at the Carlin, Nevada sleeping quarters. The FRA allowed the railroad to construct a new dorm within a few hundred feet of where hazardous materials cars are switched. This specifically violates the requirements that any new quarters must be constructed at least one half mile away from switching. In addition, the employees are constantly interrupted by noise. There are three crossings in the immediate vicinity of the dorm and at each crossing the locomotive engineer must sound a horn and bells. This happens about 18 times per day. Everyone knows the loudness of a train horn and bells. However, an FRA inspector in sworn testimony stated that the noise at Carlin did not violate the regulations. This shows how ridiculous the standards are--locomotive horns and bells do not violate the regulations, but certainly interrupt the rest of those trying to sleep at Carlin, Nevada.

Maintenance, Testing, and Inspection Standards for Grade Crossings

Grade crossing accidents continue to be the highest cause of casualties on the railroads. As previously mentioned, accidents at rail-highway crossings increased last year from 7,161 in 1983 to 7,276 in 1984. Fatalities were 12.7% higher, and injuries increased 14.8%. The FRA Administrator in earlier testimony pointed out that rail-highway grade crossings and trespasser related fatalities comprise over 90% of all railroad fatalities. Congressional financial support for upgrading crossings and greater public awareness of "Operation Lifesaver" has been effective in improving safety. However, that is not enough. There needs to be regular testing, inspection and maintenance of the crossings.

The federally funded traffic control systems at crossings have greatly improved the safety for the traveling public. Still, only about one-third of the public grade crossings have active devices such as bells, lights, or gates. The overwhelming majority of crossings are marked only with a cross buck sign. Many have no protection at all. The Department of Transportation, in earlier studies, pointed out that if 15,000 additional crossings were provided with improved protection, accident costs would be reduced nearly three times that of the installation and maintenance costs of the improvement.

The ironic aspect of this critical safety area is that there are no Federal regulations requiring adequate maintenance, inspection and testing of grade crossings. The National Transportation Safety Board has been critical of the DOT's failure to take corrective action against defective warning devices and poorly maintained grade crossings. In 1975 the Brotherhood of Railroad Signalmen and the Communication and Signal Division of the Association of American Railroads jointly prepared and recommended to FRA the adoption of minimum installation, inspection and maintenance regulations. Unfortunately, the FRA did not adopt the regulations because of opposition from a major carrier within the AAR, and FRA's determination that there were few grade crossing accidents caused by malfunctioning warning devices. The FRA's reliance on the statistical data was misplaced for obvious reasons. Generally there are no investigations of defective crossings unless a death occurs, and there are no requirements for reporting malfunctioning crossing devices. Moreover, the statistics upon which FRA relied were generated solely from accident reports submitted by the railroads. After a grade crossing accident has occurred, a railroad's potential exposure to liability is incentive enough for it to assert that the signal system was operating properly. Relying on the railroad industry's self generated statistics is like placing the fox at the gate to guard the chicken coop. There are numerous ways in which a signal system may fail to operate and not be detected in post-accident investigation. We will be happy to provide you with the technical reasons why defects may not be acknowledged by a railroad in an investigation. It is simply illogical and unsafe that substantial sums of Federal money be spent on purchasing and installing grade crossing protection equipment, but there are no equivalent requirements for maintenance of the installed equipment.

Qualified Employees To Perform Initial Terminal Tests and Inspection

After promulgating the liberalized amendments to the power brake rules in 1982, the Administrator, as well as the Associate Administrator for Safety, on numerous occasions stated that the new rules would be strictly enforced, and that FRA would use the full panoply of its legal remedies to achieve compliance. The new rules were intended to place great emphasis on the initial terminal tests and inspections by qualified employees. The Administrator stated that the maximum fine would be imposed for each violation. However, we feel we have been double-crossed both by FRA and the railroads. In the first place, the FRA has not required strict compliance with the regulations. Trains regularly leave terminals with little or no inspections, many contain defective cars, and in very few instances have the railroads been fined for their wholesale daily violations. Secondly, the railroads have used the new regulations as a basis for furloughing or reassigning qualified carmen, and requiring initial terminal tests and intermediate tests to be performed by train crews.

FRA states that their responsibilities are to see that the inspections and tests are performed in accordance with the regulatory standards, regardless of the craft of employees who performs them. We agree that the responsibility lies within the FRA's jurisdiction. However, this is where the FRA falls flat on its face. The FRA has been very effective in creating a huge smokescreen by its public relations. However, the agency has not fooled rail labor. The FRA has stated that train crews are used to perform inspection and tests, and this of course, is part of the smokescreen. The trainmen aren't inspecting the trains in compliance with the regulations as Mr. Riley would have everyone believe. If they were, bad ordered cars would be shopped instead of allowing them to be kept running from one end of the railroad to the other.

Moreover, the train crews, generally, have not been given adequate training nor have they been instructed on the full responsibilities and demands of the Federal laws, such as under the freight car safety standards or the hazardous materials requirements. Carmen are recognized as being qualified to perform the tests and inspections, and they have been given rigorous training by the carriers, before being permitted to perform tests and inspections. The effect of the FRA's shutting its eyes to obvious violations and the carriers use of unqualified and untrained employees to perform all the tests and inspections that are required by Federal law, have resulted in very dangerous train operations. It is obvious from anyone knowledgeable about this issue that the quality of the initial terminal tests and inspections and the intermediate inspections have significantly deteriorated, rather than improved as contemplated by the rule changes. Where no carmen are present, there are literally no inspections for hazardous materials violations or freight car standards violations. We have found that the equipment, overall, is in poor condition. It is beginning to show up in the statistical data, by equipment defects causing more and more injuries and deaths. The absence of proper initial terminal inspections presents further hazards to cities and towns through which these improperly inspected trains pass. A typical example of this overall problem involves an accident at Denver, Colorado on April 3, 1983 the Denver and Rio Grande Western Railroad. There a coupler on a box car broke and the car subsequently impacted with a tank car causing a nitric acid spill. The NTSB stated that contributing to the accident was the lack of Federal regulatory inspection or an industry practice for a periodic inspection to detect defects in hidden car components. (NTSB Rept.No. RAR-85-10).

Therefore, we are proposing that only qualified personnel be permitted to perform the initial terminal tests and inspections, as well as the intermediate inspections, which will also make them available to perform the freight cars and hazardous materials inspections.

Training And Work Standards for Train Dispatchers

Since last year there have been several catastrophic addidents caused in part by the inadequate training of dispatchers. At times the pace and the tension resulting from the workload of a train dispatcher equals that of an air traffic controller. In addition the equipment used by the dispatchers is becoming more sophisticated. However, the railroads are doing very little to teach the employees how to properly use the equipment, and newly hired dispatchers in particular are poorly trained. As you know last year the House unanimously passed an amendment which required the Secretary to conduct and complete an inquiry into whether training standards are needed for dispatching trains. The Secretary has done nothing to implement the intent of the House. Congress should not allow another year to go by without dispatchers being properly trained. Waiting another year for the Secretary to study the issue would certainly not be in the best interests of safety.

Harassment

In 1930 Congress enacted an amendment to the Federal Railroad Safety Act which had the intent of prohibiting harassment of rail workers by the carriers. Unfortunately, the amendment has been ineffective for several reasons. First of all, the harassed employee could only pursue his or her claim under the Railway Labor Act. Since the passage of that amendment, we are unaware of any case that has been concluded through that process. It simply takes too long to resolve such a case under the Railway Labor Act procedures. Secondly, in most cases the carrier does not fire the individual; rather he is harassed continuously on his or her job. However, the only remedy under the provisions of the amendment is lost wages. Unless the employee in the appropriate case could recover punitive damages, the legislatio will be of little help. One noteworthy example of harassment should be brought to your attention. On the Santa Fe Railroad a former FRA safety inspector returned to work for the railroad. He began noticing obvious safety problems, and reported them to the FRA. The Santa Fe learned of these complaints and subsequent fired the former inspector. The inspector has been without work now for more than a year. The Act was designed to prevent such acts by a railroad but the railroads recognize that the Amendment has little protection for the employees.

Another aspect of harassment that particularly angers the railroad workers is that FRA safety inspectors have been revealing to the carrier officials the names of employees who submit complaints of safety violations to the FRA. Once the carrier becomes aware of the name of the complaining employee, he is targeted and subjected to harassment.

Hazardous Materials

Rail shipments of hazardous materials continue to plague the public. There have been numerous past accidents involving the release of toxic or flammable materials which have resulted in injuries, death, property damage, as well as mass evacuatior The FRA recently issued a final rule on required improvements in certain jumbo sized tank cars. The RLEA does not think tha the new rulemaking promulgated on January 27, 1984 goes far enough. There are approximately 10 to 15 thousand small sized tank cars that carry the same products as the jumbo tank cars. These are much older than the jumbo tank cars and are not covered by the new regulation. See also NTSB Report No. RAR-85-10 at p.10 where the Board stated that it is "concerned that the complete spectrum of DOT specification tank cars authorized to carry materials posing risks to public safety if punctured or otherwise breached was not addressed in the rule."

In addition, nuclear waste shipments are expected to increase significantly as nuclear power plants reach waste storage capacity. Previous fire tests on railroad nuclear waste containers have indicated that in some railroad fires, these containers can emit harmful radiation. Rail shipments of cryogenic materials are also expected to increase significantl Many such materials are toxic and flammable but there are no requirements that the cars have fire protection. One particular hazard to the crews is that many of the materials used in the interiors of locomotive cabs and cabooses are highly flammable or generate toxic fumes when heated. Generally, these cabs have inadequate fire detection and subpressure systems.

Reporting Causes of Accidents

One other problem that needs your assistance relates to the reporting under the Accidents Reports Act. As you know the railroads alone make the determination of the cause of every accident. We have serious reservations concerning the accuracy of the figures presented to FRA. You must keep in mind that these statistics are the ones relied upon by FRA, Congress and the public in making decisions on railroad safety. They are the figures quoted to you by every witness discussing rail safety. The point is that there must be more reliability in these statistics. One major flaw is that rail workers who are involved in every accident have no input in determining the causes of accidents. The railroads attribute human error as a major cause of accidents nationwide (over 25% last year). At least in such cases where a railroad assigns human error as a cause of an accident, the said employee (or collective bargaining representative) should be permitted to state on the form mailed to FRA what he or she determines to be the cause of an accident. Where the cause of the accident is disputed, the FRA should investigate the records and make an independent determination of causation. This would provide some integrity to be built into the accident reporting law.

Disclosure of Employee's Name Who Submits Safety Complaints

Closely connected with the harassment issue is the fact that FRA safety inspectors reveal to the carrier officials the names of employees who submit complaints of safety violations to the FRA. This targets the particular employee for many types of harassment by the carrier. This is just another example where the FRA is playing in the hands of the railroads. The FRA's excuse for disclosing the names is that the carrier could not be sued in Court for the violation without assistance from the complaining witness. The obvious answer to that is to prohibit disclosure of the names until a lawsuit is actually filed by FRA for enforcement. You can count on one hand the number of times that FRA has sued a railroad to recover a fine. During the claims collection process, disclosure of the name should always be prohibited. The railroad should only be provided the substance of the alleged violation during these settlement negotiations.

HEARING LOSS

It is axiomatic that prolonged exposure to noises encountere in many industrial environments can produce a permanent hearing los This is particularly true in the rail industry, where employees are subjected to noise levels sometimes exceeding 100dba. Of course, once there has been a noise induced hearing loss, normal hearing cannot be restored. Rail labor has brought the matter of excessive noise and the co-related health and safety problems associated witl excessive noise to the attention of the FRA many times. Our pleas have literally fallen on deaf ears at FRA. Over prolonged periods of time, the typical rail worker on operating equipment in the yarc and shops are subjected to excessive noise which clearly has result in hearing impairment. However, the railroads and the FRA simply stick their collective heads in the sand and hope that the problem will vanish. The FRA must take responsibility to assure the safety of the employees and the public, and FRA should take the initiative to determine the extent of hearing impairment in the rail industry. In short, the FRA should issue regulations to require the railroads to reduce the work environment noise levels.

DIESEL FUMES IN LOCOMOTIVES

Many railroads throughout the country are now operating caboose-less trains. These trains usually contain more than one locomotive unit, and the crewmembers who formerly rode in the caboose are now being required to ride in one of the trailing locomotive units. This is necessary because the lead locomotive does not have sufficient seating capacity for the crewmembers. These trains are powered by diesel fuel, and the exhaust smoke and fumes from the locomotive engulfs the seating compartment of the trailing locomotive where some of the crewmembers are seated. This creates an extremely unsafe and unhealthy condition because the employees are forced to inhale these toxic fumes. The soot in the diesel exhaust is very dangerous in that it contains numerous known carcinogens, nitrous oxide, nitrogen dioxide, carbon monoxide and carbon dioxide.

We have received numerous complaints throughout the country that our members have become very ill from the smoke and fumes. The illnesses include, but are not limited to, severe throbbing headaches, blurred vision, disequilibrium, burning eyes, coughing and spitting up blood, aggravation of sinus problems, nausea and carbon monoxide poisoning. The United Transportation Union filed complaints concerning these dangerous conditions both with the Occupational Safety and Health Administration and the Federal Railroad Administration. The response from the acting Regional Administrator of OSHA dated August 3, 1984 states, inter alia, that

> "FRA has indicated to us that it enforces regulations dealing with exhaust fumes in trailing locomotives and other rolling

> stock. We have examined their regulations, and we agree that FRA has exercised its authority in this instance."

The United Transportation Union informed the FRA of these problems by letters dated May 8, June 25,29, July 19, August 6, 10,13,27,29 and 30, 1984. The FRA has failed to take any action on these complaints to correct this hazardous condition.

EMPLOYEE STRESS

One only needs to visualize an engineer proceeding around a curve at 100 miles per hour and ahead on the track is a person directly in the path of the locomotive. The engineer cannot stop the train in time because it takes almost a mile for a loaded 60 car length train to stop. What if the scene in front is a school bus stopped on the tracks at a grade crossing? Until recent years very few have given much thought to the stress that engineers mus face every day in operating thousands of tons of equipment at hig speeds. In early 1984 the Brotherhood of Locomotive Engineers commissioned Decision Dynamics, an Ohio firm, to perform a detail anaysis of engineer stress in the northeast corridor. That firm had previously performed stress-management work with returning Vietnam veterans and in various other industries. The firm took questionnaires from 160 northeast corridor engineers and followed those up with psychological profiles to eliminate the possibilities of exaggeration or underemphasis. The firm concluded that engineer stress is real. Poor maintenance was cited as a source of much of the caused stress. Two major items were faulty speedometers and inadequate radio communication systems. The speedometers are generally faulty, and the radio systems are over-crowded and subject to excessive static. Adding to the problem is in the attitude of mid level supervisors who demand that engineers violate certain rules just to keep schedules or the desire to move the equipment off the particular railroad's property. The implications of stress upon safety are ominous, and the FRA should take positive action to help eliminate these stress factors, which could and do, result in accidents.

MAINTENANCE OF WAY EQUIPMENT

The maintenance of way employees have the highest percentage of injuries and deaths per man hour worked than any other craft of employees. Many of the accidents are caused by defective equipment, but there are no Federal standards covering the highway vehicles and rail cars used by maintenance of way employees. The National Transportation Safety Board has recommended that maintenance of way vehicles be covered by Federal standards. The FRA has not responded

DESIGNATED TERMINALS

The Hours of Service Act (45 U.S.C. § 61 _et seq_) establishes limitations on the number of hours during which certain classes of railroad employees may remain on duty. The Act specifies that t on duty shall not include periods available for rest at a "designat terminal." Uncertainty about the term's meaning generated litigati and Congress in 1978 adopted an amendment to clarify the meaning. This amendment was jointly agreed upon between rail labor and the Association of American Railroads. That agreement is reprinted in the Congressional Record p.H2278, October 11, 1978. A portion of the agreement upon which Congress relied states:

> "However, it is the intent of the amendment to permit but not require the carrier and employee representative to _mutually agree_ upon other relief points as "Designated Terminals." To be valid, any such Agreement would, of course, have to _clearly indicate_ that the parties intended to establish a point in question as a "Designated Terminal" for purposes of the Hours of Service Act." (underlining added)

What is happening today is that a number of railroads have unilaterally established points which they are calling designated terminals. These points have not been mutually agreed upon with rail labor. The FRA's Office of Safety has investigated a number o these complaints, and concluded that the carriers violated the Hours of Service Act. However, when the violation reports were forwarded to the Chief Counsel's Office, the lawyers there refused to impose any fines. Orally, we have been advised that the FRA Chief Counsel's Office does not intend to process any of the violations that have been forwarded to it by the Office of Safety. The position of the Chief Counsel's Office apparently is that this matter is one for collective bargaining, and the FRA is not going to get involved. Someone should remind the FRA that the Hours of Service Act was meant to be enforced by FRA and when the Act is violated, fines should be imposed.

SANITATION ON LOCOMOTIVES

One of the major chronic problems on a train is poor sanitation. Some railroads are better than others but on every line a problem exists. The toilets are generally not cleaned, they remain broken for long periods of time, and the odors are sickening. The employees must suffer with these indignities without any assistance from FRA to correct the problem.

CRASHWORTHINESS OF LOCOMOTIVES

For many years the railway labor unions have attempted to obtain regulations to provide safe locomotives. In 1971 FRA itself held a conference on the problem of locomotive cab safety at which FRA representatives dramatically illustrated the need to protect cabs in collisions by showing slides of low-speed collisions in which the cabs of locomotives were destroyed. A 1972 study of accidents involving locomotive cabs concluded that "[t]he severity and nature of the accidents in the first part of this report point to the need of designing greater elemental safety in strength and location of the control compartment in locomotive cabs".[2/] Also in 1972, a preliminary report prepared by the Accident Analysis Division of FRA gave the highest priority among cab modifications to protection of cab occupants in the event of collisions and concluded that

> [a] very high percentage of road locomotives in service have little or no protection against total demolition of a control compartment by intrusion of other vehicles objects above deck level;.....[3/]

[2/] Department of Transportation, Federal Railroad Administration, Identification and Categorization of Accidents and Injuries in Cabs of Locomotives, p.3 (1972)

[3/] Federal Railroad Administration, Engineering and Accident Analysis Division, Study of Locomotive Control Compartment Protection of Crews in Event of Collision,p.3, (1972) SIGNAL PROBLEMS

Properly functioning signal systems are of paramount importance to the safety of train operations. The Signal Inspection Act was enacted by Congress in 1937. In 1939 rules were promulgated covering the installations, maintenance and testing of signal systems and relate appliances (commonly referred to as the "RS&I). These regulations received major revisions in 1950, 1960 and again in 1984. RLEA is confident that if the new regulations were properly enforced, they would promote signal system safety, and the signals governing the safe movement authority of trains would function as intended. When the 1984 changes were adopted, we were given assurance by the FRA Administrator, that the mutually agreed upon regulations would be strictly enforced by FRA. Unfortunately, that has not been the case. We wish to emphasize that the RS&I regulations promulgated only establish minimum standards--regulations which the parties unanimously agreed were needed to provide minimum safety of operation. A number of railroads have adopted more stringent standards to govern the signal systems on their respective rail lines.

(a) The Brotherhood of Locomotive Engineers and the Brotherhood of Railroad Signalmen have brought to FRA's attention the matter of signal failures which either resulted in accidents or near misses. False proceed signals are occurring with sufficient regularity that FRA must do something more than accumulate data on the failures. Many lives have been endangered because of false proceed signal indications resulting in collisions. The FRA should undertake a nationwide assessment of the signal systems to determine why false proceed indications are so prevalent, and then require corrective measures to be undertaken. How many accidents and near misses have to occur before FRA does something to correct the problem?

(b) In addition to the enforcement responsibilities, a number of other duties flow to the FRA under provisions of the Signal Inspection Act. The Act also includes "...authorized to inspect and test any system, devices, and appliances referred to in this section." (49 C.F.R.§ 236). We submit FRA is not putting forth a reasonable effort to inspect or test signal systems. Records of inspection activities by FRA clearly illustrate that even though an additional 8 inspectors have been hired since 1981, there has been a significant decrease in the numbers of inspections made. Signal facilities, too numerous to list here, have not been inspected by FRA in the last 8 to 10 years. It is RLEA's position, that when components of the signal system are in a condition where they do not meet the minimum requirements set forth in the RS&I, these are violations, for which fines should be imposed. Too often the Federal S&TC inspectors are acting as nothing more than a supervisor for the railroads. When a defect is discovered the inspector merely requests the railroad to correct it. Proper inspections are responsibilities of the railroads. Such work constitutes normal maintenance and testing tasks and should not be subsidized indirectly by taxpayers footing the bill for federal agency inspection personnel serving in a supervisory role for the railroads. This practice also violates the Act's requirement that the carrier shall perform the inspections and maintenance in accordance with the minimum standards, and that testing be performed on a periodic basis.

Another example of quality control supervision by FRA has been ongoing on the Southeastern Pennsylvania Transit Authority. There, FRA S&TC personnel have been providing technical assistance to SEPTA in the signal systems being installed by outside contractors. FRA has discovered a number of "glitches" in the circuits being installed which directly compromise signal system safety. SEPTA should be required by FRA to employ knowledgeable personnel to supervise the project rather than assign the responsibility to someone who is a castoff from its bus division

(c) Under provisions of 49 C.F.R.§ 235, FRA has the statutory responsibility of granting or denying petitions or applications involving the modification or outright removal of signal systems. FRA is not consistent on these matters. In some cases it is readily apparent from records in a particular docket that recommendations of the FRA technical staff assigned to review the subject have been overruled, for political reasons or favoritism.

As an example, we suggest that the Task Force review the docket in BSAP-1941. That docket covers an application for approval to discontinue the signal system between Newark and Steubenville, Ohio. A review will disclose a coverup of a violation involving the removal of a significant portion of the signal system without FRA approval. In that case, the removal was so far advanced that FRA would have found itself under unbearable pressure if it had not subsequently approved the application. No violation was cited by FRA.

We are aware of a number of other instances of coverup of violations under both 29 C.F.R.§§235 and 236. (i.e.,16 bridge locks were removed without authority and indirectly involved in a passenger train derailment in the immediate vicinity; track occupancy relays which did not de-energize (when shunted to substitute for track occupancy) at an interlocking of a heavily traveled commuter railroad, etc.) We will be happy to provide you the specific details if you desire.

QUALIFICATIONS OF FRA PERSONNEL

In filling positions in the Office of Safety, the slots are not being replaced by employees experienced in railroad safety. One need only to compare the qualifications of the employees ten years ago versus today who administer the violations of the safety statutes and regulations. We do not intend to embarrass the present Office of Safety staff, because it is not the employees fault that they do not have rail safety experience, it is the fault of the person(s) who placed them in the particular job. If more persons in the Office of Safety knew more about rail safety, maybe the safety problems could be reduced.

WORKING RELATIONSHIP WITH FRA

Rail labor feels completely left out in the safety related decisions at FRA;yet,we are the ones being injured and killed by defective equipment and unsafe operations. The FRA has forced us into an adversary position in almost every safety issue. This is so because we feel that FRA refuses to enforce the laws and regulations in a responsible manner. In addition, over the years we cannot point to one petition being adopted which was proposed by a rail labor organization, unless the AAR had first agreed to it or Congress mandated it. We do not think we can be wrong all of the time. We are not so naive as to not understand the political realities at the FRA. However, there must be some semblance of fair play before rail labor in good conscience could support FRA's administration of rail safety.

GLAZING

As the result of numerous incidents of vandalism, in 1976 rail labor unions began seeking better protection from bullets and rock throwing directed at trains. After research, Congressional interest, and a joint request by the AAR and RLEA, the FRA on December 31, 1979 promulgated regulations covering glazing standards for windows and doors in locomotives, cabooses and passenger cars. These regulations still have not been fully implemented, and some carriers are openly violating the regulations without any enforcement by FRA. For example, after waiver upon waiver being granted by FRA, some without union objections, it became clear that something had to be done to gain compliance. In December, 1983 the rail unions, the AAR, and the FRA reached an understanding as to how the equipment still not in compliance would be handled. It became apparent very quickly that the FRA was not going to even require the violating railroads to live up to the newest agreement. The frustrations reached its peak last summer when the FRA allowed the Seaboard Coastline Railroad to cover the windows and doors of cabooses with sheet metal to avoid the glazing requirements. Summertime in the South in those cabooses created an impossible work environment, not to mention the safety and health problems. Several hundred cabooses were covered, before the FRA requested SCL to stop. FRA did nothing to require the SCL to take the sheet metal off, nor did FRA fine the railroad. The boarded up cabooses are still in service on the railroad.

SYSTEM SAFETY ASSESSMENTS

The FRA has undertaken several system assessments of various railroads, to determine the level of compliance with the safety laws. The results of these assessments cause even more concern over the agency's credibility. We have no criticism of the method used by FRA to perform the assessment. Our problem relates to the results. The FRA seems to bend over backwards not to call things the way they really are. For example in a May, 1985 report of the 1984 Safety Assessment of the Burlington-Northern Railroad Company, the FRA stated in its summary of findings "....the Burlington-Northern is well managed and staffed by competent, well trained employees. Overall compliance with Federal regulations and carrier rules was at acceptable levels and, in may cases was considerably above the industry average." (p.3). Such statement is shocking when compared with the substance of the assessment. There were 85 areas listed where compliance problems existed. The first concern was that train service employees assigned to predeparture and initial terminal inspection tests often lacked the specific knowledge required to perform their inspections. (p.3).[4/] Also, contrary to the above quoted summary the FRA stated officer staffing and supervision are "below the basic level necessary to permit compliance..." and that some first-line supervisors have "no direct experience in matters that fall under their supervision." (p.6)

RADIO COMMUNICATION PROBLEMS

There are several major problem areas relating to communications. We have already discussed Signal Failures, and the issue of Training and Work Standards For Train Dispatchers. This section will be limited to problems in radio communications and FRA's failure to impose adequate standards. Lack of effective communication between train crews and control points have had a severe impact on safety. The NTSB on many occasions has cited communication problems as a contributing factor in train collision accidents (See e.g. NTSB Report No.79-4).

As Labor-Management Task Force on Rail Transportation sponsored by the FRA and known as the "St.Louis Terminal Project" highlighted the problems which exist and made a number of recommendations in their report dated July 28, 1982. In the interes of some brevity, the your Task Force is referred to the report for various recommendations. To highlight one concern, when dispatchers

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[4/] Please refer to our discussion captioned "Qualified Employees To Perform Initial Terminal Tests and Inspections" at p *supra*.

issue train orders or track warrants to train crews, they over-ride all transmissions on that particular frequency, thereby interruptin or preventing any transmission between rear and head-in of trains, between trains. This creates potentially very hazardous train operations. The FRA has done nothing to implement the suggestions and accidents continue to occur because of radio communication prob We recognize the Federal Communications Commission is involved here also. However, FRA could require the carriers to seek additional radio frequencies, where needed and could confer with FCC to assist the carrier obtain the exclusive channels.

TRACK SAFETY

When the track safety standards were first adopted in October, 1971, rail labor expressed its concerns with many safety areas that FRA did not address. These and other problems were repeated to FRA in 1978 (Docket No.RSSI-78-5) and in 1982 (Docket No. RST-3), all to no avail. The Department of Transportation System Center in Cambridge, Massachusetts has been exploring the issue of rail safety. H.David Reed, Chief of the track safety research recently was quoted,

> "Even after the Association of American Railroads developed its track safety standards, the number of track-caused accidents was still growing up. We had safety standards, but they did not seem to be having any effect."

The subject matter of rail labor's areas of concern are briefly mentioned below. Please refer to the above dockets for the full details.

1. The level of supervision by FRA inspectors over track is not adequate. Track related accidents continue to be the highest single cause of railroad mishaps.

2. There are no standards covering bridges, trestles and similar structures, many of which are very old. Also, the walkways on bridges and trestles are often slippery, dilapidated, and lacking in hand or guard rails.

3. There is no protection for maintenance of way crews working in humping, switching and freight yards. In particular are the hazards encountered when such crews are repairing tracks and train movement on adjacent track continues.

4. All track under repair should be subject to a strict 10 mile per hour speed limit. Also, regulations should be adopted to require temporary signs be placed to alert approaching trains when crews are working on the track.

5. Whenever maintenance of way person is forced to work alone, he or she should be protected by placing torpedoes on the track at least 100 feet in either direction.

6. When a train is approaching on an adjacent track in double track territory where maintenance of way crews are working, the train crew should be notified by train order of the ground crew's location.

7. There needs to be adequate shelter and safety equipment on track motor cars. For example, the car should be equipped with a windshield wiper controlled by the operator; a slide curtain on each side; a roll curtain on the rear; a canopy on the top; a first-aid kit; a generator powered headlight and two rear electric lights.

8. Defective tools have caused many injuries to maintenance of way employees. There are no standards for covering the use of tools, the types that are acceptable, and a requirement for their periodic inspection.

BROTHERHOOD OF LOCOMOTIVE ENGINEERS

Mr. WOISCHKE. I am John Woischke, legislative liaison, a locomotive engineer with 15 years of operating experience on the Penn Central and Conrail railroads. I have been personally involved with the Northeast corridor the last 3 to 4 years. I have two very clear messages to deliver to you today from the engineers operating the trains in the corridor.

No. 1 is the Northeast corridor is a time bomb waiting to go off because of the working conditions and working relationship in that corridor.

The other message I have is that Amtrak and Conrail are both in dire need of an alcohol and drug prevention program.

The employees at this time are subject to the programs in effect on these two railroads, they are not participants. As you surely realize as much as I do, safety on a railroad cannot be a unilateral activity. It must be a bilateral activity in which both parties participate in the safety on these railroads.

The employees fear reprisals by Amtrak because they know there will be reprisals from Amtrak for coming out here and speaking out. But they did give me several messages they would like for me to relay to you.

Let me give you a couple examples of working conditions that exist in the corridor to this very day. You may find this a little outrageous.

OPERATING CONDITIONS

On October 22, 1984, train No. 121 operating at 110 miles an hour hit a 73-year-old man near Bristol, Pa. The engineer stopped near Croydon, Pa. He got out and inspected his train. The body was impaled on a drawbar of the train and his parts were hanging down, his legs were hanging down on the ties.

He called the dispatcher in Philadelphia and explained the situation, stating he needed help.

The engineer was ordered to bring the train into Philadelphia. He passed through stations with people on platforms at Croydon, Eddington, Cornwells Heights, Andoiasia, and Thorndale. As he approached the Holmesburg station he was instructed to stop because he set off a dragging equipment detector. They thought there was something mechanically wrong with his train.

This man was instructed and ordered to drag this body and listen to his feet go across the ties for 10 miles. This is outrageous.

In September 1985, train No. 203, New Brunswick, N.J., while traveling at 110 miles an hour, hit a person on the tracks. The engine was covered with blood. They found the top half of the body sitting on a drawbar.

The same locomotive engineer 4 days later had a rock fly through the window, the bulletproof window, mind you, of his train at Halethorpe, Md. The engineer sustained 100 cuts to his face and neck and would have lost both eyes had he not been wearing his own personal safety glasses.

Incidentally, his jacket that was hanging on a wall directly behind him was torn to shreds from the debris of that breaking window.

This same engineer in early 1986 was operating a southbound train at Bridge Interlock at Baltimore when northbound train No. 82 struck a trespasser on No. 2 track. He was traveling at 50 miles per hour and knocked the body of the trespasser over into No. 3 track in front of the southbound.

The engineer on the northbound was in shock and ended up going to the hospital. He lost a lot of time with regard to his psychological problems with this.

These stories go on and on. I can fill this hearing room today with a litany of this same type of experience.

CONTRACTED STUDY

The respect these engineers get is pitiful. This was demonstrated in onsite testing in psychology laboratories in Jamaica, N.Y., where we had a professional psychologist take the engineers in, connect them to a Lafayette device similar to a lie detector machine and measure physiological responses when interviewed about conditions in the workplace.

Two things jumped out of this interview not revealed in anonymous written surveys about the engineers. No. 1, they carried with them the problems of these type accidents, they gunnysacked them and had a miserable time living with them. They accumulate as they continue to work.

The second issue is the treatment and relationship between line management and the locomotive engineers.

It just jumped out at this psychologist. She had her mind blown over the thing, she couldn't imagine in today's real world we had these relationships between labor and management. It is atrocious.

The Brotherhood of Locomotive Engineers, as you are probably aware, has been involved in some very indepth stress studies, stacked studies, we did an interview through anonymous surveys, we brought them in personally through the psychology laboratories, then we did a survey about their personal health.

We sent these to individual Members of Congress. Amtrak had a study of their own, they reviewed ours.

In many cases their professional consultant concurred with our professional consultants' remarks. There were stresses in the workplace that needed to be alleviated. Another thing their consultant called for was further study.

One thing Amtrak did on top of that was they felt they should be able to go through the Conrail engineers who have flow rights to go onto Amtrak and pick out engineers that couldn't handle the stress instead of coming in and reducing some of the stress issues.

The Government Accounting Office also reviewed the study in November 1986. One thing they criticized us for was not studying frequencies of these events.

It's the randomness of stresses of this magnitude that really heap problems on top of these locomotive engineers.

We have asked numerous times for some type of public forum where we can come out and tell what is going on on this corridor. It has always fallen on deaf ears, even with the Government Accounting Office. Their's was a nonchalant attitude of there is no scientific value in this.

One of our locomotive engineers wrote to our president. You know, you talked earlier about drug use. Something you need to wonder about is why, why would people want to use drugs?

This engineer stated carriers must realize vast responsibility is vested upon its engineers, the men and women given these responsibilities are oftentimes treated as though they were third-rate human beings performing third-rate duties.

A person uses alcohol and/or drugs to change the way they feel. I firmly believe if an engineer felt better about his job, felt as if he were worth something, he would not want to change the way he feels.

PREPARED STATEMENT

Senator LAUTENBERG. Mr. Woischke, your testimony is of great interest. We have in fact given you the forum today you say you haven't had. We hope we will be able to hear more from you.

We will enter your written testimony into the record. Perhaps we will have another chance to chat with you beyond the time we have allotted today.

We do have to get into questions, so we will ask you now if there is a single word that you have left or two, fine. If not, we have heard enough to understand that we have to look further at this. We appreciate it very much.

Is there something further?

Mr. LINDSEY. Yes, Senator. In the interest of time I will defer my statement for the record so we can go into the question and answer phase.

Senator LAUTENBERG. Thank you. Mr. Mann.

Mr. Mann. That's fine, Senator.

[The statement follows:]

STATEMENT OF DON LINDSEY

Good Morning! My name is Don Lindsey and I am Vice President and National Legislative Representative for the Brotherhood of Locomotive Engineers or the BLE as it is generally referred to in the railroad industry. The BLE is the oldest railway labor organization in the western hemisphere and we represent approximately 30,000 locomotive engineers in the United States and Canada.

Since its inception in 1863, the BLE has had as a part of its platform, the requirement that the organization work for safer and cleaner working conditions and it is in that spirit that I come before you today.

I want to bear witness to certain facets of rail operation in which the BLE holds a particular interest, especially because the locomotive engineer is the employee who shoulders the greatest amount of responsibility in the operation of today's railroad, yet unfortunately, receives the least amount of credit when things go smoothly, but the greatest amount of blame when things go wrong.

RESPONSIBILITIES OF THE LOCOMOTIVE ENGINEER

As everyone in the railroad industry is aware, technological advancements have created major changes for the operation of trains on America's railroads. The statistics demonstrate an increasing ton-mile movement of commodities and a continuous decrease in the number of railroad operating employees. This very clearly means that there is more responsibility to the job of operating a train as the trains have grown longer, weigh more, travel faster and carry an increasing number of hazardous materials. Every locomotive engineer operating a train has in his or her hands, what could become a very lethal instrument if there is error, negligence or willful disregard of the operating rules.[1]

These changes have been spawned in large part by the deregulation of the rail and transportation industries and the changes for more efficient operation which were mandated by the resulting increase in competition. Unfortunately, these are changes which have also resulted in a reduction in safety and an increase in stress in the workplace due to a decrease in crew size or a shift in the location of the normal crew to a position in the controlling locomotive unit on the train and thus a disproportionate increase in workload.

Often during the operation of a train, there are many simultaneous demands which are made on the engineer. In reality, no human being is capable of receiving all of this date, placing a priority on it, and deciding on the proper course of action, without creating a situation which could be very dangerous.

Knowledge of and compliance with railroad operating rules is far different in practice than the railroads would have the public or the government believe. While rules compliance is expected, it is extremely difficult to run a railroad and obey all of the operating rules at the same time. Management is aware of this fact. In fact, management at times encourages the violation of safety rules and in some instances employees will willingly violate operating rules in order to expedite traffic and to get along with management. An engineer who obeys these rules in the literal sense cannot be too effective or efficient, yet if he does not obey them he/she could be subject to discipline. This is a serious dilemma because if an accident takes place, the rule will be invoked and the employee will be subject to discipline.

As if this pressure is not enough, the engineer must also continuously monitor radio transmissions, sorting out only those communications that apply to his train, yet continue to operate his train in a safe and effective manner.

LOCOMOTIVE INSPECTION

If during the locomotive engineer's inspection of his motive power prior to commencing work, he or she finds a defect which renders the locomotive unfit for service according to standards set forth by the Federal Railroad Administration, the engineer may not refuse to operate that locomotive without subjecting himself to discipline and possible discharge. If, on the other hand, the defect is noted on the work report and the defect is serious enough to report it to the F. R. A., the employee risks retaliation on the part of the employing carrier, or even worse, total inactivity on the part of the FRA and its inspection forces.

The BLE recommends that a check list be developed which lists which items must be operative on a locomotive and which gives a locomotive engineer, clear-cut guidelines which will allow him to refuse to operate said locomotive should he /she find them to be inoperative upon completing his or her inspection.

In addition, we request that the government continue to fund state PUC inspectors so that they can continue the enforcement of laws designed to protect railroad workers and the general public. These state inspectors help to offset the shortage of Federal inspectors available to cover the large amount of motive power, plant & equipment in operation in the United States.

LICENSING AND CERTIFICATION

It is a well known fact that in the railroad industry, locomotive engineers are required to pass more rigorous physical exams, especially with respect to eyesight and color vision, than any other member of the operating crew. In addition, he/she must pass more thorough written rules examinations and be qualified on machinery and air brake mechanics above and beyond the requirements of any other member of the operating crew.

These requirements, coupled with practical hands-on operating experience have provided the railroad industry with a very versatile operating employee. Regardless, of how long a person observes the operation of a train with respect to physically controlling and operating it in compliance with the rules, it is this organization's contention that no one can really acquire the necessary skills of being a locomotive engineer without some form of supervised train handling.

In almost every case the fireman, who was a qualified engineer or an apprentice, served as a backup and shared in the operating responsibilities. He/she was a second pair of eyes and ears, communicating signals to the engineer, often handling radio communications and always monitoring speed and rules compliance. Additionally, the fireman could be consulted if there was any doubt about a train order, special instructions, bulletin order or recent timetable changes, and readily detected and corrected locomotive malfunctions, and provided relief for the engineer because of stress or the call of nature.

Even though there are many federal laws, rules and regulations governing the behavior of the locomotive engineer, there are no rules involving or defining criteria which must be met to operate as a locomotive engineer. The BLE asks that funding be earmarked to consider the question of certification or licensing of locomotive engineers and that we be allowed to participate in the development of these criteria.

NORTHEAST CORRIDOR

While I don't need to give it too much coverage in this statement, a brief history of the Northeast Corridor is in order. It was originally operated by the Pennsylvania Railroad and it carries much the same level of traffic today as it did fifty years ago, with the exception of World War II when it probably carried much more. There were also somewhere between three and five times the number of employees as are presently employed.

Amtrak, using the club of other congressionally mandated requirements to cut costs, has negotiated agreements with the BLE and other rail unions that have substantially changed the wages and working conditions of employees.

The Brotherhood of Locomotive Engineers has expressed concerns about the Northeast Corridor situation that go far beyond wages, everyday working conditions, and minor annoyances of the job.

It is truly regrettable that a tragedy of this magnitude we have now seen is finally drawing any attention to our concerns. Typical of Amtrak's response when we first raised these issues was the comment of Amtrak Chairman W. Graham Claytor, who told a reporter that Northeast Corridor service is "no more stressful than a 10 m.p.h. local where they can stop and do some coon hunting."

The BLE, using its own funds, but employing an outside firm, has conducted a study of the working conditions our members must work under in the Northeast Corridor and how much stress this causes in the lives. This report has been reviewed by both Amtrak and the General Accounting Office and there is one point on which we all agree, there deserves to be further study on this situation.

NIOSH, the National Institute for Occupational Safety and Health has expressed possible interest in conducting further study on this problem, and the BLE hereby requests that all necessary funds be made available to them should they choose to tackle this matter. We also ask that any such study be free from all ties to any other government agency to ensure that it would be as free from bias as is possible.

RECOMMENDATIONS

Our concern is first for the safety of the traveling public as well as for the safety of our members. In that same vein, the BLE asks that funding be provided to study our request for legislation involving the following items:

1) An engineer and a fully qualified co-engineer on every train operating in the United States.

2) An eight (8) hour call to work before being required to go on duty. This is to ensure that all crew members have proper rest before going on duty and not just time off as required by the Hours of Service Act.

3) A mandatory limit of 22 tours of duty per month.

4) The right to mark off after a tragedy such as a car - train collision or a serious injury or death of a fellow crew member, a pedestrian, or a trespasser, without being harassed or suffering a loss in pay. We also want mandated stress reduction programs made available to engineers attempting to cope with the aftermath of major accidents in which persons have been maimed or killed.

5) Establishment of training standards governing promotion to locomotive engineer.

6) Limiting the number of persons which can be located in the control cab of a locomotive to three or less.

7) Extensive emergency training for the engineer on how to handle imminent collisions, particularly with tanker trucks containing hazardous or flammable materials. Derailments concerning hazardous materials, etc.

A more in-depth analysis regarding these topics can be found in the attached appendices identified as NTSB Safety Recommendation R-85-52 and the BLE's response to that recommendation dated March 7, 1986.

Finally, the BLE requests that money be provided to fully fund an effective Employee Assistance Program on Conrail, such as is already in place on many other railroads with the Operation Red Block Program.

Furthermore, we believe that a philosophy of prevention such as is employed by the Operation Red Block Program, will do far more to help with the problem of drug and alcohol abuse by railroad employees than the police/penal approach which is being purported in the news media and other government circles.

I thank you for allowing me to appear before you here today and I stand ready to answer any questions you may have.

Attachments

[ATTACHMENT 1]

ISSUED: May 16, 1985

SAFETY RECOMMENDATION(s)

R-85-52

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Since 1971, the National Transportation Safety Board has investigated more than 30 major railroad accidents which involved the issues of the joint responsibility assigned by operating rules to the conductor and the engineer for the safety of the train, the failure of unassertive or inadequately trained crewmembers to take action when engineers were violating the rules, and the operation of locomotives by unqualified personnel for the assigned engineer. (See Attachment.) Many of the causal events in these accidents involved the failure of the engineers to carry out their responsibilities for proper operation of the trains.

In most of the accidents, the conductor was on the caboose at the rear of the train, a location which limited his ability to carry out his supervisory responsibilities over the engineer. In other investigations, the Safety Board learned that neither the conductor nor any other supervisor had seen the head-end crewmembers before they reported for duty or during their tour of duty. Among others, the Safety Board has identified the following major deficiencies which a conductor could have corrected or prevented before the accident occurred: (1) crewmembers reporting for duty under the influence of alcohol or using alcohol while on duty; (2) unauthorized persons operating the locomotive; (3) engineers failing to comply with operating rules with regard to speed and signal indications.

Generally, under the customary operating rules, a fireman or a head brakeman has been considered as a monitor and back-up in the safety system; however, evidence indicates that a trainman seldom is assertive in exercising his responsibility to act when the engineer is not abiding by the rules and often that engineers resent being monitored by a trainman (usually a head brakeman) who is not qualified to operate the locomotive.

The Safety Board first addressed the safety issue resulting from the assignment of responsibility jointly to the conductor and engineer for the safe operation of the train and made remedial recommendations in its report of the investigation of the head-on collision between Penn Central freight trains at Herndon, Pennsylvania, on March 12, 1972. As a result of that investigation, the Board recommended that the Federal Railroad Administration (FRA) "In the promulgation of regulations governing railroad operating rules, where responsibility for safe operation of the train is assigned jointly to the engineer and conductor, require that they be located and informed so that they can make quick, effective decisions" (Safety Recommendation R-73-11). The Safety Board reiterated Safety Recommendation R-73-11 after it investigated a rear-end collision between two Southern Pacific freight trains at Indio, California, on June 25, 1973.

On July 6, 1973, the FRA advised the Safety Board that it agreed in substance with the recommendation and that an advisory committee on railroad operating rules was being established. In a letter dated October 10, 1974, the FRA said, in part, "An advisory committee on railroad operating rules is presently being established. This committee will undoubtedly recommend operating rules in accordance with the recommendation, provided that a decision is reached to make both engineer and conductor equally responsible for the safety of their trains. . . ." In 1977, changes in the language of Standard Rules 34, 99, and 93 were recommended to the Association of American Railroads (AAR). However, none of the changes in the rules respond directly to Safety Recommendation R-73-11. Because of the lack of positive action on this issue, the Safety Board placed the recommendation in a "Closed--Unacceptable Action" status.

Following the investigation of a rear-end collision of two CONRAIL freight trains at Muncy, Pennsylvania, on January 31, 1979, the Safety Board recommended that the Federal Railroad Administration "Promulgate regulations to require the conductor or other employee in charge of the train's operation to be located and informed so that he can properly supervise the safe operation of the train" (Safety Recommendation R-79-61).

In a response dated November 13, 1979, the FRA indicated that its understanding of the recommmendation implied that the conductor "should be in the locomotive cab with the engineer so that he would take action if he observed any inattention on the part of the other crewmembers." The FRA rejected the recommendation on the basis that the conductor was needed on the caboose and that locating the conductor in the locomotive cab may not enhance the conductor's ability "to supervise the operation of the rear of the train." In ensuing correspondence, the Safety Board has attempted repeatedly to impress on the FRA and other involved organizations that the emphasis should be placed on procedures for keeping the conductor informed rather than on locating the conductor at a specific place.

On April 30, 1984, in response to a Safety Board followup letter on Safety Recommendation R-79-61, the FRA reiterated its previously stated position that ". . . its action in developing and enforcing the operating rules programs accomplished the intent" of the recommendation.

On February 4, 1976, two Penn Central freight trains collided head-on at Pettisville, Ohio. As a result of that investigation, the Safety Board recommended that the FRA "Promulgate rules to require engine crews to communicate fixed signal aspects to conductors while trains were en route on signalized track" (Safety Recommendation R-76-50). On May 13, 1977, the FRA said that it rejected Safety Recommendation R-76-50 because it believed "that in keeping train crews alert, a diligent, carrier-conducted rules instruction and testing program on operating rules would be a great deal more effective than would be Federally promulgated rules of the type recommended."

On December 24, 1980, the FRA responded further that it "believes that safe operations of trains can be accomplished through a continuous and vigorous training program in operating rules which includes effective proficiency testing. This approach recognizes unique and specific railroad operating conditions and thus affords a more flexible approach to achieve safe operating procedures."

On February 2, 1980, a Burlington Northern (BN) nine-unit locomotive collided with a standing train at Angora, Nebraska. The head brakeman and the engineer were killed and three crewmembers were seriously injured; property damage was estimated at $1,297,000. As a result of its investigation, the Safety Board recommended that the BN "Insure that Rule 800, which assigns the responsibility for train operation to conductors, is adhered to strictly and conductors are adequately trained to make the necessary decision for the safe handling of the train" (Safety Recommendation R-80-35). The BN did not agree with the Board's recommendation and, consequently, the Board placed the recommendation in a "Closed—Unacceptable Action" status.

On October 16, 1980, two crewmembers were killed and two were injured when two Union Pacific (UP) freight trains were involved in a rear-end collision at Hermosa, Wyoming. Property damage exceeded $990,000. The Safety Board reiterated Safety Recommendation R-76-50 and recommended that the AAR and the UP "Require the engine crews to communicate fixed signal aspects to conductors while trains are en route on signalized tracks" (Safety Recommendations R-81-48 and R-81-41, respectively). The UP rejected Safety Recommendation R-81-41 and said that the recommendation, "if followed, would create a serious hazard in that, if a conductor on the rear-end of a train were to misunderstand the communication or mistake a communication from another train, it could result in that conductor taking unnecessary emergency action resulting in possible injury and/or derailment." In its June 11, 1982, response to Safety Recommendation R-81-48, the AAR stated that it had discussed the recommendation "with a number of experienced, knowledgeable railroad officials, who, without exception, disagree with the conclusion of the Board. . .The carrier officers contacted believed that the crewmembers in the locomotive cab calling the aspect of the signals one to another is all that should be required." Safety Recommendation R-76-50 was discussed in the report on the rear end collision of Seaboard System freight trains at Sullivan, Indiana, on September 14, 1983, and placed in a "Closed--Superseded" status as a result of the Board's issuing Safety Recommendation R-84-30A to the FRA on June 18, 1984. Similar recommendations, R-84-32 and R-84-33, were issued to the AAR and the Seaboard System, respectively, as a result of the Sullivan accident, in which a similar safety issue was evident.

On December 28, 1981, a Louisville and Nashville Railroad Company (L&N) freight train struck the rear of a standing train after passing two restrictive signal indications at New Johnsonville, Tennessee. The failure of the conductor "to request clarification of a radio message from the dispatcher. . .when he did not understand the message" was considered as a contributing causal factor. The conductor of the standing train was killed, the engineer and head brakeman of the striking train were injured, and damage was in excess of $998,000. The Safety Board recommended that the L&N "Require an engineer to radio the aspects displayed by all wayside automatic and interlocking home signals affecting movement of the train to the conductor, and have the conductor acknowledge the aspects called" (Safety Recommendation R-82-100).

The L&N rejected Safety Recommendation R-82-100, and on February 21, 1984, the Board placed the recommendation in a "Closed—Unacceptable Action" status. A similar recommendation, R-83-57, was issued to the Missouri Pacific on July 11, 1983, as a result of the Board's investigation of the accident at Possum Grape, Arkansas. The Missouri Pacific rejected that recommendation and the Board has placed that recommendation in a "Closed-Unacceptable Action" status.

Since the December 28, 1981, accident, the Safety Board has investigated nine other major accidents in which the investigations identified deficiencies in the effective performance of the conductor's prescribed responsibilities for the overall management of the train and his joint responsibility with the engineer for the safe operation of the train. (See Attachment, Items Nos. 23 through 31.)

The foregoing indicates that the historical assignment of joint responsibility for the safe operation of the train to the engineer and conductor does not assure safe operation, particularly when the conductor is on the caboose. It appears that the conductor only rarely questions what the engineer is doing and, in fact, does not exercise any supervision. Many engineers discourage "interference" by conductors in purely train handling activities and even in train operations matters which clearly are within the supervisory responsibility of the conductor.

Recommendations by the Safety Board to address the adverse consequences of the failure of the joint assignment of responsibility rules to assure the safe operation of trains generally have been met with objections by all parties. The FRA has responded to almost all recommendations related to the problem with the opinion that ". . .a diligent, carrier-conducted rules instruction and testing program on operating rules would be a great deal more effective than would be Federally promulgated rules. . ." or that "The FRA also believes that safe operations of trains can be accomplished through a continuous and vigorous training program in operating rules including effective proficiency testing." The Board has no quarrel with the logic of this position; however, the assignment of joint responsibility has not worked successfully in practice. The responses and lack of action by FRA and the industry appear to be based on their acceptance of an established position with which they are comfortable, rather than on the need to remedy a serious safety problem. There does not appear to have been any much needed systematic safety analysis of this matter to account for the human elements in railroad accidents.

There is a basic flaw in a concept which assigns to the conductor the responsibility for safe operation of the train and then does not provide the conductor with the necessary information to make operational decisions. For example, a conductor cannot be expected to monitor speed and caution the engineer about over-speed if the conductor is in a location which does not provide access to either the signal aspects or a speedometer.

The thrust of the Board's early recommendations was to convey the idea that carriers who assign conductors responsibility for the management of the train should provide the conductors the necessary information to carry out their duties, or locate the conductors where they will have direct access to such information as speed indications and signal aspects. The protestations by the FRA and carriers that the conductor must be on the rear of a train because of the work requirements largely have been supervened by the change in work rules which allows cabooses to be eliminated under certain conditions.

The Safety Board has investigated several accidents (see Attachment, Item Nos. 18, 22, 23, 26, and 28) in which it found unauthorized persons operating the locomotives. The operation of locomotives by persons other than engineers is not an evolutionary result of the removal of firemen; however, its safety implications and adverse consequences have grown since carriers removed firemen from most freight trains. Based on evidence disclosed during these investigations, the Safety Board determined that had there been a second person in the locomotive qualified to operate the locomotive, some of the accidents could have been avoided.

When the accident data is analyzed purely from a safety standpoint, without regard to union work rules or State laws, the need for more than one qualified train operator in the locomotive is obvious. Even on short routes, the locomotive operator needs relief occasionally. Therefore, the Safety Board concludes that safe freight train operations under most conditions require that at least two persons should be on the locomotive, one of whom should be in charge of the train, and that both persons should be qualified to operate the locomotive. Where the exigencies of the job require it, additional persons should be assigned to the operating crew. The Board's conclusion is based entirely on safety considerations and is without regard to work rules about crew size, rights of given crafts to certain work, or the continued use of cabooses.

Simply moving the conductor to the locomotive will not solve the problem of split responsibility for the safe operation of a train inherent in rules which make the engineer and the conductor jointly responsible. However, such a move would provide the conductor with access to operating data, such as speed indicators and signal aspects, before action had to be taken in respect to the train; moreover, it would provide the conductor the opportunity to assess the fitness of the other crewmembers and to monitor their performance. Further, even where there is mutual respect between the engineer and the conductor, evidence indicates that there remains a belief among engineers that the engineer is the final authority in matters involving the operation of the locomotive. An employee in charge should be assigned unambiguous responsibility for decision-making in all matters affecting the operation of the train. Moving the conductor to the locomotive without further training and changes in operating rules and practices will not address the need to provide a qualified person to operate the locomotive when the engineer needs relief. The designation of an employee who can operate the locomotive as person in charge of the train would be a step toward the solution of the split responsibility issue. Such a measure would provide two persons who are qualified to operate the locomotive, one of whom would be the person in charge who can make the decision as to which one will run the locomotive, as well as all other decisions which affect the operation of the train.

The Safety Board is fully aware that implementation of this measure involves a drastic change in philosophy and historical rights on the parts of management and labor. However, accidents continue to occur because one employee is not in clear charge with attendant accountability. These accidents result in the loss of lives, expose communities to dangers from hazardous materials spills, and cost the railroad industry millions of dollars annually. Accordingly, the Safety Board recommends that the Association of American Railroads, the Brotherhood of Locomotive Engineers, and the United Transportation Union:

> Cooperate with the Federal Railroad Administration in the implementation of Safety Recommendation R-85-51 which reads, "Require that there be at least two crewmembers on locomotives of through freight trains who are qualified to operate the locomotive, that one of these two persons have total responsibility for the train and all employees thereon, and that the second person serve as assistant to the person in charge." (Class II, Priority Action) (R-85-52)

BURNETT, Chairman, GOLDMAN, Vice Chairman, and BURSLEY, Member concurred in this recommendation.

Jim Burnett

By: Jim Burnett
Chairman

[ATTACHMENT 2]

	Report No.	Railroad Accident Report Description
1.	NTSB-RAR-72-4	Rear End Collision of Two Burlington Northern Freight Trains at Sheridan, Wyoming, March 28, 1971
2.	NTSB-RAR-73-2	Collision of Southern Railway Passenger Train with Derailed Cars at Penn Central Freight Train Being Yarded at Potomac Yard, Arlington, Virginia, April 27, 1972
3.	NTSB-RAR-73-3	Head-On Collision of Two Penn Central Freight Trains at Herndon, Pennsylvania, March 12, 1972
4.	NTSB-RAR-73-4	Head-On Collision of C. B. & O. Freight Trains Near Maquon, Illinois, May 24, 1972
5.	NTSB-RAR-74-1	Rear End Collision of Two Southern Pacific Freight Trains at Indio, California, June 25, 1973
6.	NTSB-RAR-75-3	Collision of Penn Central Freight Train With Counterweight of Open Lift Span Drawbridge at Cleveland, Ohio, May 8, 1974
7.	NTSB-RAR-75-6	Head-On Collision of SL-SF Freight Trains at Mustang, Oklahoma, September 1, 1974
8.	NTSB-RAR-75-9	Rear End Collision of Two Texas and Pacific Railway Company Freight Trains, Meeker, Louisiana, May 30, 1975
9.	NTSB-RAR-76-2	Central Transportation Company Train Collisions, Leetonia, Ohio, June 6, 1975

	Report No.	Railroad Accident Report Description
10.	NTSB-RAR-76-3	Rear End Collision of Alaska Railroad Trains near Hurricane, Alaska, July 5, 1975
11.	NTSB-RAR-76-10	Head-On Collision of Two Penn Central Transportation Company Freight Trains, Pettisville, Ohio, February 4, 1976
12.	NTSB-RAR-77-6	Head-On Collision of N&W Freight Trains, New Haven, Indiana, October 19, 1976
13.	NTSB-RAR-78-1	Collision of Two Conrail Freight Trains, Stemmers Run, Maryland, June 12, 1977
14.	NTSB-RAR-79-2	Head-On Collision of L&N Freight Trains, Florence, Alabama, September 18, 1978
15.	NTSB-RAR-79-6	Rear End Collision of Two Conrail Freight Trains, Muncy, Pennsylvania, January 31, 1979
16.	NTSB-RAR-79-9	Rear End Collision of U.P. Freight Trains, Ramsey, Wyoming, March 29, 1979
17.	NTSB-RAR-80-1	Rear End Collision of SP Freight Trains, Thousand Palms, Califorinia, July 24, 1979
18.	NTSB-RAR-80-2	Rear End Collision of Conrail Freight Trains, Royersford, Pennsylvania, October 1, 1979
19.	NTSB-RAR-80-7	Head-On Collision of Nine Burlington Northern Locomotive Units With A Standing Freight Train, Angora, Nebraska, February 6, 1980
20.	NTSB-RAR-80-10	Derailment of Western Pacific Railroad Company Freight Train Extra UP3734 West, Hayward, California, April 9, 1980
21.	NTSB-RAR-81-3	Rear End Collision of Two Southern Pacific Freight Trains, Hermosa, Wyoming, October 16, 1980
22.	NTSB-RAR-82-4	Rear End Collision of Louisville & Nashville, Freight Trains at New Johnsonville, Tennessee, December 28, 1981
23.	NTSB-RAR-83-5	Derailment of Illinois Central Gulf Freight Train Extra 9629 East (65-2-28) and Release of Hazardous Materials, Livingston, Louisiana, September 28, 1982
24.	NTSB-RAR-83-6	Side Collision of Two Missouri Pacific Freight Trains, Possum Grape, Arkansas, October 3, 1982
25.	NTSB-RAR-83-9	Rear-End Collision of Two Burlington Northern Railroad Company Trains, Pacific Junction, Iowa, April 13, 1983
26.	NTSB-RAR-84-2	Rear End Collision of Two Seaboard System Railroad Freight Trains at Sullivan, Indiana, September 14, 1983
27.		Side Collision of Two Conrail Freight Trains at Milbury, Ohio, November 11, 1983
28.	NTSB/RAR-85/02	Collision of Two Conrail Freight Trains near Saltsburg, Pennsylvania, February 26, 1984

	Report No.	Railroad Accident Report Description
29.	NTSB/RAR-85/04	Head-On Collision of Two Burlington Northern Freight Trains at Wiggins, Colorado, April 13, 1984
30.	NTSB/RAR-85/04	Rear-end Collision of Two Burlington Northern Freight Trains at Newcastle, Wyoming, April 22, 1984
31.	NTSB/RAR-85/06	Head-On Collision of Two Burlington Northern Freight Trains at Motley, Minnesota, June 14, 1984

Letter From John F. Sytsma, President, Brotherhood of Locomotive Engineers

March 7, 1986

Mr. Jim Burnett, Chairman
National Transportation
Safety Board
800 Independence Avenue, S.W.
Washington, D. C. 20594

Dear Mr. Burnett:

This is in response to the National Transportation Safety Board's Safety Recommendation R-85-52 which concerns more than thirty railroad accidents addressing the issues of joint responsibility assigned by operating rules to the conductor and the engineer for the safety of the train, the failure of unassertive or inadequately-trained crew members to take action when engineers were violating the rules, and the operation of locomotives by unqualified personnel for the assigned engineer.

As everyone in the railroad industry is aware, technological advancements have created major changes for the operation of trains on America's railroads. The statistics demonstrate an increasing ton-mile movement of commodities and a continuous decrease in the number of railroad operating employees. This very clearly means that there is more responsibility to the job of operating a train as the trains have grown longer, weigh more, travel faster and carry an increasing number of hazardous materials. Every locomotive engineer operating a train has in his or her hands what could become a very lethal instrument if there is error, negligence or willful disregard of the operating rules.

Those people who are employed as locomotive engineers have traditionally been highly respected and looked up to by all other railroad crafts as well as the general public. As one railroad official has stated, "They are leaders in the workplace." Locomotive engineers almost always acquire their talents through on-the-job training with their peers and, realistically, there is no other way to learn the feel of an iron ore train running in behind you on a grade or the slack action resulting from the slosh of liquids in tank cars. Mixed freight offers a different challenge as a block of heavy cars at the rear of a train has a whip effect and various brake equipment throughout a train will set up and release at different rates causing variable train action. It is an art to brake a long empty unit train.

Knowledge of and compliance with railroad operating rules is far different in practice than the railroads would have the public or the government believe. While rules compliance is expected, it is extremely difficult to run a railroad and obey all of the operating rules at the same time. Management is aware of this fact. In fact, management at times encourages the violation of safety rules and in some instances railroad employees will willingly violate operating rules in order to expedite traffic and to get along with management. An engineer who obeys these rules in the literal sense cannot be too effective or efficient, yet if he does not obey them he/she could be subject to discipline. This is a serious dilemma because if an accident takes place, the rule will be invoked and the employee will be subject to discipline.

As if this pressure is not enough, the engineer must also continuously monitor radio transmissions, sorting out only those communications which apply to his train, and yet continue to operate his train in a safe and effective manner.

Often during the operation of a train, there are many simultaneous demands which are made on the engineer. In reality, no human is capable of receiving all this data, prioritizing it and deciding on the proper course of action, without creating a situation which could be very dangerous.

Safety recommendation R-85-52 addresses the response or assertion of other crew members at a time when there was obviously a need for help or emergency action.

It is a well known fact that in the railroad industry, locomotive engineers are required to pass more rigorous physical exams, especially with respect to eyesight and color vision, than any other member of the operating crew. In addition, he/she must pass more thorough written rules examinations and be qualified on machinery and air above and beyond the requirements of any other operating crew member.

These requirements, coupled with practical hands-on operating experience have provided the railroad industry with a very versatile operating employee. Regardless of how long a person observes the operation of a train with respect to physically controlling and operating it in compliance with the rules, it is this organization's contention that no one can really acquire the necessary skills of being a locomotive engineer without some form of supervised train handling.

In almost every case the fireman, who was a qualified engineer or an apprentice, served as a backup and shared in the operating responsibilities. He/she was a second pair of eyes and ears, communicating signals to the engineer, often handling radio communications and always monitoring speed and rules compliance. Additionally, the fireman could be consulted if there was any doubt about a train order, special instructions, bulletin order or recent timetable changes, and readily detected and corrected locomotive malfunctions, and provided relief for the engineer because of stress or the call of nature.

As you are well aware, this most qualified and able back-up for the locomotive engineer has or will be removed from railroad service.

Inasmuch as cabooseless operations are rapidly becoming the norm in day-to-day railroad operations, the locomotive engineer is being forced to assume additional duties of using newly-installed gauges and monitoring devices to determine the status of his trainline and end-of-train movement. This was previously the responsibility of the conductor and flagman who rode in the waycar. With the disappearance of the caboose, it will not be long before there are more than enough bodies crowding up the locomotive cab and the railroads will be seeking operation of all trains with only two employees, except where more are absolutely necessary for switching, etc.

The locomotive engineer has always been in charge of the safe operation of the train as well as the supervision and instruction of those operating employees riding the headend.

In recognizing the fact that railroad technology and train operating procedures are evolving at a rapid pace and require a greater degree of skill and knowledge to proficiently handle a train, the Brotherhood of Locomotive Engineers responds to Safety Recommendation R-85-52 with the following remarks and proposals to the National Transportation Safety Board, the railroad industry and the Federal Railroad Administration.

1. AN ENGINEER AND A CO-ENGINEER

The Brotherhood of Locomotive Engineers is willing to meet with any and all railroads to discuss the realignment or change of operating crews, the scope of each job and the individual responsibilities of each operating employee. We would seek and encourage an equitable and cooperative evolution which would enhance operating efficiency and improve safety. It is this organization's desire that current employees be provided an opportunity to advance themselves through a series of promotions in order to qualify for more productive and responsible positions.

As you are aware, we are currently in national negotiations with the carriers and we have proposed the Lake Erie Plan, a concept designed to increase competition with other transportation modes through reduced labor costs. It also calls for the retraining of current employees so that they can be promoted to the position of locomotive engineer. The plan foresees two qualified people on every new business train and would eventually create an environment in which two persons, an engineer and a co-engineer, would be the normal manning for every train. With two qualified people manning the trains, they can share in the duties of operating the trains which would be safer than the current procedure of one person doing it all. More details about this plan will be furnished upon request.

2. AN EIGHT HOUR CALL

There is a greater safety problem on our railroads than alcohol and drug use by operating crew members. This problem centers around the fact that there are many crew members who report for work without proper rest. I emphasize proper rest - and not time off as required by the Hours of Service Act.

Whenever operating employees return home from a trip, they attempt to resume a normal living pattern such as sleeping at night, eating at the established meal times within their households, participating in family activities and even enjoying some social life. Unfortunately, many people have no idea when they are going to be called to work and often are not properly rested to assume a 12-hour tour of duty when called, however, they report. Consequently, some crew members become inattentive on the job and the engineer, who may need assistance more than ever, either has to keep someone else alert or forget about them in an effort to concentrate on his or her job as the task requires 100% of a person's attention.

It is a fact that it is impossible for an employee to remain in an around-the-clock state of readiness to assume a 12-hour tour of duty and the Brotherhood of Locomotive Engineers suggests that the Hours of Service Act be amended to require that every railroad operating employee who works on a call basis be given an eight-hour notification. This would eliminate the guessing game, allow people time to get a reasonable amount of rest, eat properly and report for work. Also, employees, upon notification, would abstain from the consumption of any alcoholic or mind-altering substances.

3. LIMIT OF 22 TOURS OF DUTY PER CALENDAR MONTH

On some railroads locomotive engineers are being required to work 20, 30 and up to 40 consecutive days without a day off. As these strings of work days get longer, the possibility increases that an individual will mix his/her personal and/or social life with their work activity. In today's society where leisure and recreational time is of major significance to everyone's lifestyle, railroad employees must have designated days off in which they can plan their personal time.

The Brotherhood of Locomotive Engineers suggests that the Hours of Service Act be amended so that a railroad operating employee will not be required to work more than 22 tours of duty in any given calendar month. If anyone works over this, it should be by choice.

4. MARK OFF AFTER TRAGEDY AND PROFESSIONAL COUNSELING

There are situations in the workplace which interfere with the job performance of locomotive engineers. One thing that is certain is that recent involvement in a serious injury or death of a fellow crew member, person(s) at grade crossing accidents or pedestrian(s) trespassing on the property is a precursor to job stress. Many engineers have a very difficult time coping with the short-term effects and long-term memories that affix a lifetime imprint consistently brought to consciousness whenever they operate another train past the place of the tragedy or see a person on the tracks.

Actions required of the engineer when there is a serious accident can increase the engineer's stress level. Such actions should be reviewed and altered, as necessary, to facilitate stress reduction.

* Requiring an engineer to inspect the engine when a person or vehicle is hit may make sense technically, but it can be highly traumatic psychologically. This is especially true if bodily remains are splashed over the engine. Cannot a person other than the engineer inspect the engine under those circumstances?

* From a psychological point of view, it may be dangerous to require an engineer to continue to operate the train after a serious accident. Continued operation not only may compound the trauma for the engineer himself, but also it can result in unsafe or inefficient job performance.

The Brotherhood of Locomotive Engineers recommends that the Railroad Safety Act be amended to address the issue of a locomotive engineer who has been involved in a tragedy. The engineer, if he/she chooses, should be permitted to relinquish control to another engineer without being harassed or without suffering a loss in pay. Guidelines must be established to permit this and post-traumatic stress reduction programs should be made available to engineers attempting to cope with the aftermath of major accidents in which persons have been maimed or killed. This type of program could certainly be incorporated with the carrers' Employee Assistance Programs.

In all such events, it should be mandatory that railroad officials and/or police officers at the scene of any accident involving the engineer should ask the engineer if he or she is O.K. and whether or not they feel up to continuing their tour of duty.

5. LICENSING, TRAINING AND NUMBER OF PEOPLE IN CONTROL CAB

The Brotherhood of Locomotive Engineers recommends that the Railroad Safety Act be amended as follows:

A. Require both a qualified locomotive engineer and a co-engineer to be in the locomotive operating compartment of any train which is in service on the main track or between terminals.

B. Every company, association, person or other entity which employs or permits any person to operate a railroad locomotive by any means within the United States shall issue to such person a locomotive engineer's operator permit. Such permit shall include the engineer's name, address, description, date of birth and a certification that such person is qualified as a locomotive engineer.

C. A locomotive engineer's operator permit shall only be issued to any person who is a trained locomotive engineer or motorman promoted from the position of fireman, co-engineer, reserve engineer, assistant engineer, apprentice engineer, helper or hostler.

D. Every locomotive engineer shall, when on duty, have in his possession a locomotive engineer's operator permit, and he shall exhibit such permit on demand of such policemen and peace officers, who may make such demands, in accordance with applicable law(s).

E. No company, association, person or other entity shall operate, or cause to be operated from the control cab, any locomotive on any common carrier by rail within the United States with more than three persons in the operating compartment of such locomotive, one of whom shall be a qualified locomotive engineer with a valid locomotive engineer's operator permit; provided, however, that an assistant engineer, fireman, apprentice engineer, helper, student engineer or hostler may operate the control cab controls in the presence and under the discretion of a qualified locomotive engineer with a valid locomotive engineer's operator permit.

6. EXTENSIVE EMERGENCY TRAINING

The BLE has been active in and supportive of the OPERATION LIFESAVER program, however, there is no comprehensive training effort on the part of the nation's railroads which is aimed solely at the locomotive engineer.

In the spring of 1984 at McBee, South Carolina, there was a disastrous collision involving an Amtrak train and a gasoline truck which is indicative of the death and destruction an engineer can be exposed to every time he/she takes charge of a locomotive. Our files contain many very gruesome photographs of similar tragedies which attest to the fact that these incidents have been occurring for a long time.

Try as we might, it seems an impossible task to get all drivers to STOP, LOOK and LISTEN. It is the belief of the Brotherhood of Locomotive Engineers that it would be very beneficial for our civilian population, the train traveling public and railroad employees if all locomotive engineers were provided training regarding emergency situations such as an imminent collision. Should an engineer:

1) Shut or open the cab windows?
2) Jump from the train before impact?
3) Put the brakes in emergency application?
4) Open the throttle?
5) Try to clear the wreckage before stopping?

These are a few of the items which should be addressed. The fifth issue, in particular, is bothersome especially when a collision involves a gasoline tanker. In attempting to stop a passenger train, a carload of people may be placed in the middle of an inferno and stopping a freight train may very well place a car of hazardous materials, dangerous chemicals, explosives, propane gas, etc., in situations which will only contribute to the problem. Any train with its air in emergency application is going to require critical minutes to release the brakes and move. On the other side of the token, a train attempting to clear a collision point may very well drag a fire bomb into a populated community, a residential or factory area or next to a school.

Hazardous material spills are another subject engineers are not adequately educated and trained to handle.

Inasmuch as locomotive engineers perform one of the most responsible jobs in our society, the importance of training and education cannot be over-emphasized. Therefore, this organization recommends that the Railroad Safety Act be amended to include a requirement that all locomotive engineers be given extensive emergency training.

Through a copy of this response, I am requesting that Mr. John H. Riley, Administrator, Federal Railroad Administration, assist this organization in making the desired changes in rules governing United States Railroads' operating procedures.

I will also be calling upon members of Congress and their committees to consider the aforementioned requests for proposing legislation, like the recently instituted rules on alcohol and drug use, that will improve the safety of this nation's railroad industry.

The BLE will be calling upon you, Mr. Burnett, and other members of the National Transportation Safety Board for your assistance and support in convincing our national lawmakers to move on such railroad safety legislation.

With kindest personal regards, I remain

Very truly yours,

John F. Sytsma

John F. Sytsma, President
Brotherhood of Locomotive Engineers

OPERATING INSPECTIONS

Senator LAUTENBERG. Thank you, very much. We don't want to cut anyone off, but we have a lot of ground to cover.

Let me address this either to Mr. Plourd or perhaps Mr. Woischke. You said you were a professional railroad engineer and that was your career. Did I understand correctly?

Mr. WOISCHKE. That's correct, Senator.

Senator LAUTENBERG. The time you spend with legislative liaison, is that in addition to——

Mr. WOISCHKE. That is correct, 15 years of hands-on operating trains, both passenger and freight.

Senator LAUTENBERG. The statement Mr. Plourd made before us said the people who do certification are not necessarily qualified to do so.

I think you said operating personnel are not necessarily skillful enough in the inspection problem to understand fully what they see.

Did I hear you correctly?

Mr. PLOURD. That's right, Mr. Chairman. Incidentally, I am a locomotive engineer, myself, with over 30 years of seniority, probably about 20 years of that hands-on operations.

What I was referring to is in many cases, and this is quite often in cases where the carriers have eliminated the position of car inspector, they then require the traincrew to perform the inspection of these trains.

As I said, these traincrews are not, have not been trained in this area, they have skills of their own, of course, which are many. But if they are required to do this they have not been given the required training to provide this kind of inspection that is necessary.

Mr. MANN. Senator, the problem is so bad that we were forced to go to Congress for relief. Last year the House of Representatives in safety legislation which we supported unanimously passed a provision which would mandate that all persons who are testing and inspecting trains must be qualified, if you will, certified. They must have adequate training.

That is simply not the case on the railroad system today.

Mr. Riley is a very articulate spokesman. He goes away unscathed. But the facts are that the Federal Railroad Administration is just turning its head to require adequate testing and inspecting of trains when they are assembled. It's just that simple.

Mr. WOISCHKE. If I could just follow up on that, my experience has often been when you go on duty the locomotive is on a ready track, your orders are you will get on that locomotive and go. You don't walk around and make a ground inspection like a pilot.

Senator LAUTENBERG. Why not?

Mr. WOISCHKE. Because you are trying to delay the train and make additional time for pay. That is basically what it comes to.

TIME CONSIDERATIONS

Senator LAUTENBERG. What is your view of the focus of management in terms of safety versus expediency?

Mr. WOISCHKE. Expediency has the priority. You are ordered to get on and go. The thing has been tested. You get on and go.

Senator LAUTENBERG. Even if you complained about the conditions?

Mr. WOISCHKE. Yes.

Senator LAUTENBERG. Who do the crews report to when they go to work?

Mr. WOISCHKE. It varies across the country. You may call a dispatcher many miles away.

Senator LAUTENBERG. What do you do, just say, "Hi, Jake. I am here."

Mr. WOISCHKE. Yes; he will say we are going to relay out there or take engine so and so and do your work.

Senator LAUTENBERG. Anybody look you in the eye and ask whether you have had a drink before you get in the cab?

Mr. WOISCHKE. In many situations the answer is no. That is why we come in with the prevention program, Red Block.

In that case the fellow crewmembers are given a procedure brochure. Everybody knows how they are going to handle Red Block when they are out there. It tells an individual how to deal with someone who comes on the job who is impaired.

This is a prevention program. That means we will prevent someone from consuming when they come on duty. If we fail there, we prevent them from coming on duty. That is before the fact.

Senator LAUTENBERG. You said something about reprisals. We are going to hear from management, and, Mr. Woischke, I assume that is not a casual reference, reprisal.

What kind of reprisals are people worried about?

Mr. WOISCHKE. There's going to be a lot of face-to-face interaction in the workplace, on the platform, riding of trains.

Back in 1984 the Brotherhood of Locomotive Engineers went on record to the vice president of labor relations and president of Amtrak and threatened to strike Amtrak because they had engineers riding on our trains ordering our engineers to violate the speed limits. We have that on record.

IMPARTIALITY OF FRA

Senator LAUTENBERG. Do you think that FRA is a good umpire, arbiter of the facts to make certain if there is a problem they are willing to go head to head with management and say look, straighten up and fly right or else?

Mr. MANN. No one has been on the back of the Federal Railroad Administration as much as rail labor has. We have attached an exhibit demonstrating just what the safety inspection performance has been versus what the fines have been.

Mr. Riley stated that most of the cases are minor infractions. But I seriously question that, Senator, because where there is a minor deviation the railroad inspector generally does not do anything about that. He talks to the railroad and gets them to correct it. That doesn't come to Washington at all, and no defect is sent to Washington.

Safety inspectors primarily come from rail labor forces, they talk to us frequently. It's just day and night between what the federal railroad safety inspectors tell us and what Mr. Riley has told you this morning.

The facts are that they are enforcing only about 4 percent of the cases.

If I may take just one moment. In the first place the inspector forces are limited. They don't even inspect one car per year.

Second, even if a defect is found on a particular car the FRA gives the railroad the opportunity to correct it. Then only if they don't correct it does it come to Washington for a possible fine.

Even if a fine is imposed, which you see is less than 4 percent of the cases, that is compromised under the Federal Claims Collection Act.

So if I am a railroad owner, what incentive do I have to comply with the Federal Railroad Administration's rule?

Sure, I want a safe railroad. But I have no incentive to comply with the federal regulations, which are simply minimum regulations.

Senator LAUTENBERG. Thank you, gentlemen.

Senator D'Amato.

DRUG ABUSE

Senator D'AMATO. Thank you, Mr. Chairman.

The observation has been made, and I think it should be noted, that the problem of drug and alcohol abuse is not one that exists solely with those who operate our rail systems, but is one which is nationwide.

I dare say that, if we are to be honest, we can take an average sample of those who have developed an acute problem of drug and alcohol abuse and we will find that problem, within 1 or 2 percent, exists at the same level between various professional groups, working groups, those in public office, and those of the fourth estate. They don't want to admit it, nobody wants to admit it. It's something we are all hiding from.

So we have a situation in which our nation has built a dependency on drug and alcohol.

Let me say, it doesn't have to do with the job, per se. Even some members of the clergy have a problem. Up and down the line, no one is immune from it.

That being the case, what kind of a program would you suggest we undertake to deal with this situation in a way which recognizes individual rights, that does not seek to be punitive but seeks to address this problem? One which really says quite forcefully that, if an individual has a problem, we are going to work to give him or her an opportunity, such as an employee assistance program, that will provide an opportunity to deal with it?

We will not countenance a continued drug or alcohol dependency which impairs one's ability.

Mr. MANN. You can't, Senator. But you must recognize the very dear to one's heart and constitutional protection. I am sure you are aware of what needs to be done in protecting an individual's rights.

Senator D'AMATO. I understand.

Mr. MANN. Where do you draw the line?

Senator D'AMATO. I am asking you.

Mr. MANN. As far as railway labor goes, legally we feel there must be some semblance of particularized suspicion before you test someone for drugs or alcohol.

Now, there are a lot of ways you can do that. No. 1, we are a minute step away from random testing in the railway industry because a railroad supervisor can stop a train at any point he wants to, he can go up into the cab or caboose or anywhere else on the train and eyeball that individual. If there is anything that looks out of the ordinary to the supervisor, they can be tested.

Now, King George is probably tapdancing on his grave when he sees that because that is the kind of problem that is real here and we have got to deal with on a practical basis.

RANDOM TESTING

So when someone says random testing, we oppose it. We oppose it on constitutional grounds and we feel very strongly that there are some protections constitutionally for a railroad employee, recognizing the very sincere problems that the public has in having a safe railroad system.

No one certainly in rail labor will condone anybody using alcohol or drugs, and history is replete with showing how we have tried to attack it.

This particular individual I wouldn't defend him in any way, shape or form, Senator. But I would like to just comment on what the test did show.

You indicated there was no question in your mind he was under the influence.

Senator D'AMATO. Absolutely.

Mr. MANN. I can only suggest to you that there is a difference of opinion.

Senator D'AMATO. You mean you have a doubt as to his being under the influence?

Mr. MANN. Well, not me, personally.

Senator D'AMATO. Or that he was impaired?

By the way, I agree with you that we need a program that constitutionally protects people, one does not harass them. At the same time, we have got to have protection for the general public.

Mr. MANN. That is where we are coming from, too.

Senator D'AMATO. As it relates to the specific case, I don't think we want to try it here. But simply allow me to say to you after having had the opportunity of being briefed, after having seen that evidence compiled and submitted both by the FRA and Amtrak, that there is no doubt in this Senator's mind that the engineer was absolutely impaired. Absolutely. You can't go through those signal signs, go through all the kinds of things that should have been done and then find a level that was reported in the blood and in the urine and tell me he wasn't impaired.

In my mind, he was absolutely impaired. If he wants to sue me for saying that, that I'm being presumptuous, the courts will have to determine, but as far as I am concerned he was impaired. Our job is to minimize these occurrences from taking place. It's a nationwide problem, nationwide.

EQUIPMENT TAMPERING

We must design a solution. I see our engineer friend, who has been at the throttle for 15 years, is dying to say something. In just 1 minute, I would love to have you respond, Mr. Woischke.

Second, as it relates to the failure of disciplining those who pull out safety devices, I think we need not only additional safety inspections, but also the government has to have the ability to discipline the people who break the rules and not just level a fine against the railroad.

If you break the rule, particularly tampering with a safety device, by God, not only should you be fired, but maybe in a certain case go beyond.

There should be that authority. We simply can't countenance tampering with safety devices.

Mr. WOISCHKE. One word that strikes me is your word prevention. That is what we do with the Red Block Program. Every working railroad employee knows when a fellow worker uses occasionally or is a troubled user.

We have the tools to get the people out of the workplace so they will not be fired. They will get help, if they cannot sustain recovery, they are out altogether. But that is what we do right now. That is not provided.

Senator LAUTENBERG. Thank you, very much.

Senator Weicker.

AMTRAK SUBSIDY

Senator WEICKER. I suppose one thing that bothers me and my friends in the railway unions who have been in the forefront of this fight, and I am sure we will get the same thing from Graham Claytor on the management side, is that for years now Amtrak has barely received enough for operating subsidies, they have not received the money to create a first-class situation.

When Amtrak came into being, I was one of those who helped to draft that legislation, there was a continual fight on the floor of the U.S. Senate to get any money for capital improvements, safety, whatever. Strictly operating subsidies.

During the past several years everyone was talking about the potential sale of Amtrak proposed by the administration this year. The fact is they pressed for that last year. Nobody has had interest in it at all as far as the latest administration is concerned.

I have to say that the opposition on the floor when Amtrak was first devised came from some of my democratic friends, particularly in the southern and western part of the United States where they didn't think it was working.

When it comes to capital improvements, it has been mentioned we should have a dual-track system, additional safety devices, cars, ought to be improved. I will tell you, this isn't the frame of reference that I have been living in and I don't think you fellows have been living in now for damned near a decade.

I want your comments on that because we are all sitting here as if there has been money galore to spend on anything we wanted for a rail system when indeed Amtrak's budget is being slashed to hell and gone.

Let's understand as a nation, after we get over the shock of this great tragedy, we have gone along with inadequately providing a decent, first-class, safe passenger rail system.

If you want to take a look at the budgets, take a look at them. That tells the story in every aspect of railroading in this country, so the blame doesn't sit on the shoulders of any few people. It sits on all of us who felt that this really wasn't worth our resources or our effort.

I want to say this aside from the individual back and forth between these gentlemen here and members of the committee.

The one group that has consistently supplied support for funding for capital expenditures over and beyond operating subsidies has been the rail labor unions of this nation, along with management, through Democratic and Republican administrations with Amtrak. Support on the floor of the U.S. Senate and House has been woeful.

That is not so much in the nature of a question but a statement that ought to be made around here, because, as I say, it has been a corporal's guard that has been out there for darned near a decade trying to get that.

Mr. PLOURD. If Jim Snyder was here today he would say amen. There is probably nobody who has worked closer together than Jim Snyder along with Graham Claytor year after year to try to get those necessary funds for Amtrak, and it has been done with the support of yourself and other friends.

It has been done with the support of yourself and other friends in the U.S. Senate, and we appreciate that.

Senator LAUTENBERG. Senator Chiles.

ROLE OF CONGRESS

Senator CHILES. Mr. Chairman, I first want to compliment you on holding these hearings. I think we need to try to find out why in the world something like this can occur; but more importantly, how can we keep things like this from occurring in the future.

I want to compliment you not only on the hearings but I also appreciate your immediate response.

I know that you were interested in asking questions and out on the scene very, very shortly after this occurred. It certainly tells this Senator that you are taking your responsibility on this committee very seriously, and I compliment you on that.

I think what we need to find out basically is what should be the role of the Congress in trying to determine how we go forward.

I would like to ask this panel basically if they would sum up for me what additional things you think the Congress needs to do.

You mentioned that you think some of these tests or inspections are randomly made and that there is some dispute in your minds as to whether the FRA is doing as much as they should do.

What do you think are the steps we should be taking now?

Mr. MANN. Senator, we did have pending until the new Congress ensued, a comprehensive rail safety bill. It unanimously passed the House last year, and we would hope this year that the Senate would take up the calling of the House and enact a bill that has been needed for a long time and it addresses many of the issues we touched in our testimony.

If you will note over your history that rail labor has at every opportunity with Congress attempted to advise them really what is going on, not a PR, we want you to know what is exactly going on, and we have offered you suggestions through the years.

And fortunately you have adopted a number of them which has improved rail safety since the Railroad Safety Act was adopted and we hope you will give that some close attention this year.

RANDOM DRUG TESTING

Senator CHILES. Well, again, you were talking about it and we see some conflict in your proposed random testing, yet of course you are talking about the need for additional inspections or more inspections that would not be random testing.

In other words, if the word is out there, you can smoke a little pot or drink a little and chances are nothing is going to happen. That may be a continuing occurrence on the part of some engineers and train personnel that would be abusing those substances.

What is the reason for checking to start with, is it, "I may get caught in this and so I better clean up my act; or better make sure that I am not doing any of this, certainly not around any of the time that I am getting ready to take a train."

What do we do in that case?

Mr. MANN. I think I better clarify, Senator, what our position is. With respect to random testing, as such, we oppose it on constitutional grounds.

However, the federal rule as presently in effect will permit something just short of random testing, that is, it will permit a railroad supervisor to stop a train or stop an employee at any point in time during his service and observe him. And if anything looks awry, his eyes, smell of breath, his gait, whatever, that would be sufficient enough, if you will, probable cause or particularized suspicion, to test that individual. We have no objection to that.

Senator CHILES. I listen to that. But I just wonder if we are talking about the use of marijuana, which we know can slow down people's reactions. Yet, we know that generally many times, you are not going to smell that on somebody's breath a little later. You are not going to see that.

How are we going to check on this when we know it impairs functions. We know it impairs reaction time, we know it impairs your ability to think, your ability to do something that is dangerous, maybe like taping down a safety device or something like that.

How are we going to check that if we have to visibly see something in order to know that something is awry?

Mr. MANN. It's a tough question, Senator. I don't think I have the ability to answer that, except to give the formal position of rail labor.

Senator CHILES. It's one thing if you are saying we are opposed to random testing constitutionally. We don't mind if that supervisor jumps on a train and then starts random testing people.

Mr. MANN. Not random testing, Senator. He has to observe something.

It's not that you go on a train and start testing everyone. There must be some objective signs or symptoms, first, to trigger that testing. At that point I think the constitution would permit it.

Senator CHILES. Mr. Chairman, I have used my time.

Mr. WOISCHKE. Could I follow up on that a little bit?

Senator CHILES. I will let the chairman make that decision.

Senator LAUTENBERG. Please go ahead, briefly.

ABSTINENCE

Mr. WOISCHKE. The federal rule does not require an abstinence period for locomotive engineers or any other railroad operating employees, whereas airline pilots do have an abstinence period.

If you could tell our people 8 hours in advance when they are going to work, we would have no problem with this abstinence period.

Currently the overwhelming majority of railroad employees must remain ready 24 hours a day in order to take a 2-hour call to take on an 8-hour tour of duty.

If you could assume 5 percent of your work force is using on any given day, you could physically test 2 percent of those people, your chance of catching one user are one out of a thousand.

Fellow workers know who the users are. Users in the past have shown they have a cloud around them, a work history. We should pick up on them through the prevention programs, and they do.

Senator CHILES. Thank you.

Senator LAUTENBERG. Thank you.

Senator Kasten.

Senator KASTEN. Thank you, Mr. Chairman.

I wonder if I can pursue with you and if I have a chance also with the Conrail people the question I was addressing to Mr. Riley before.

That is that he can assure us some of the mechanical things can be fixed and he can assure us he can go back to manufacturers in the case of the radio in our Wisconsin accident.

EQUIPMENT TAMPERING

He cannot assure us that he can go back and have an accident or an active tampering fixed. That is either your responsibility or Conrail's responsibility or our responsibility, or what is most likely, a combination of all three of our responsibilities.

Under what circumstances would a person tape the whistle he was talking about? Is the whistle bothersome or troublesome? Why does the whistle get taped?

Mr. LINDSEY. Aggravation, Senator. If you are operating a train and the whistle is in back of you and is too shrill or hurts your ears, the average engineer or fireman or anyone may tape the whistle.

Senator KASTEN. Why does someone put a wood block on the throttle, so they can move and walk around the cabin?

Mr. LINDSEY. Or they have to go to the toilet en route.

Senator KASTEN. Why does someone tape this other, I don't understand exactly what the pushbutton that has to be pushed every so often is.

Mr. LINDSEY. That is the alerter. It has to be monitored by touching it every 20 seconds. By doing that, as Mr. Riley said before, the fact is that after awhile it becomes an aggravation. Every 20 seconds you have to touch the alerter so that it won't go off and stop the train.

Senator KASTEN. Your position is that a person who would tamper with the whistle or put a wood block on the, I don't know if it's called——

Mr. PLOURD. Deadman's control.

Senator KASTEN. That those people should or should not be fired or disciplined?

Mr. LINDSEY. I wouldn't say that is prevalent in all cases. Maybe in a few.

But I think generally speaking the engineer is dedicated enough that he holds his foot on that deadman control, because if the mechanical forces find blocks in the cab they are going to throw him out. It would be extraordinary to say that every engineer operating every train in this country had a block in the cab. It's not true.

WORKING ENVIRONMENT

Senator KASTEN. You have probably had experience in the cab, also. I am sure there is a huge difference as there is everywhere else between what is written down and what actually happens on an 8 or 10 or whatever hour run.

But we have a problem here. Whether it's a problem of work rules or a problem of a safety device that doesn't work or a problem of a safety device that can easily be overridden and the kind of community of opinion in the cab is that it's OK to override it, we all do it, we won't mention it or say anything, or even the supervisors know it's being done too, and this is simply the way the train gets run.

There is a problem here if we have three different safety devices all of which are routinely being overridden and no one feels anyone should be disciplined because they are overriding or disabling those safety devices.

Mr. PLOURD. Senator, with respect to the deadman control, that is a device that's normally used in most railroads around the country.

The alerter device, and I believe the other device mentioned also, is probably for the most part used in the Northeast corridor.

However, the deadman control device, I don't think people should put too much faith into that because there are many locomotives being built now that don't even have one on them.

In fact, in many railroads the ones they have had the railroads themselves have discontinued them. The device is right there, but it's been disconnected.

Senator KASTEN. Let's look at the whistle, that is the one probably most of us can understand simply. That is a condition of employment.

If people would rather have a work atmosphere that didn't have a whistle going off than one that would, but there is an overriding public opinion that the train needs to have a whistle.

I was in the shoe manufacturing business. We had a number of machines which cut leather with dies. In order to minimize accidents we would have ways people would have to touch two things over here and the machine would go down to keep their hands out of the machine.

It would have been easier to do the job and their piece rates would have been better and it would have been a more enjoyable job if you were not to have these devices.

But the devices were there to protect what was thought to be an overriding public, or in this case, a company and machinery equipment manufacturer concern.

There are some problems in a railroad cab, a loud whistle is one. Nevertheless we have decided or someone has decided a loud whistle is important to the overall operation of a successful train system.

Shouldn't there be a way of either negotiating to change the whistle if you want a different sound whistle, or if you establish that this is important for the safety, that we have a rule whereby someone who puts tape on that whistle gets fired, he loses his job?

WHISTLE TAMPERING

Mr. WOISCHKE. No problem with that, Senator.

Two important points about the corridor incident are: The whistle in that particular engine was located within the engineer's control stand and was behind steel panels. On that particular engine it was not visible to the locomotive engineer; and the second point is, the equipment involved in this accident was not protected for up to 6 hours until after the accident.

Senator KASTEN. I think we might be in the category I was talking about before where the rule says one thing but another kind of thing happens day to day. He had 8 or 10 different whistles taped just in the last couple days.

I am not saying that engineer taped that whistle that day. But I guess I would assume maybe even I could figure out getting into the cab for the first time whether or not that whistle had been taped, it either is going to work or it isn't.

He tries it the first time and he knows he has a taped or malfunctioning whistle one way or another. If it had been taped, there is obviously a kind of body of opinion that accepts taping whistles.

Am I right or wrong?

Mr. WOISCHKE. Every whistle has its own sound. If he heard it, he may not necessarily have gone to look at it, squeaking air or whatever. No two whistles are the same.

Senator LAUTENBERG. Thank you, very much.

Mr. LINDSEY. One comment.

Senator LAUTENBERG. Briefly.

Mr. LINDSEY. In regard to there are other items in the cab of a locomotive that compete for the attention of a locomotive engineer.

For instance, he has to be fully a certain ahead. At the same time he's listening to the radio from the dispatcher trying to reach his train through other traffic also on the radio.

He is also seeing the road cross blowing the road crossing whistles ahead and watching the speed of his train, so there are a number of things he has to be alert about while moving the train at 110 miles an hour.

So not just the one item on the brake whistle, other items call for his attention, the throttle housing. So it's not just the one item that we are discussing.

Senator LAUTENBERG. Thank you, very much, gentlemen, for your very informative testimony. We may have questions for you that will be submitted in writing. We would ask you to respond promptly.

Mr. LINDSEY. Thank you, Mr. Chairman.

CONSOLIDATED RAIL CORPORATION [CONRAIL]

STATEMENT OF RICHARD B. HASSELMAN, SENIOR VICE PRESIDENT, OPERATIONS

ACCOMPANIED BY:
DONALD A. BRINKWORTH, GENERAL COUNSEL
JOHN T. GORMAN, DIRECTOR, EMPLOYMENT ASSISTANCE PROGRAM
ALAN FISHER, DIRECTOR, OPERATING RULES

NATIONAL RAILROAD PASSENGER ADMINISTRATION [AMTRAK]

STATEMENT OF W. GRAHAM CLAYTOR, JR., PRESIDENT

ACCOMPANIED BY:
HENRY MOORE, EXECUTIVE VICE PRESIDENT AND CHIEF OPERATING OFFICER
DENNIS SULLIVAN, VICE PRESIDENT OF OPERATIONS

STATEMENT OF MR. HASSELMAN

Senator LAUTENBERG. Mr. Claytor and Mr. Hasselman, please.

Mr. Hasselman, I wonder if we can invite you to make your remarks first, as briefly as you can, recognizing we will have your full statement in the record.

If you will introduce your colleagues, we invite you to give us your testimony.

Mr. HASSELMAN. Alongside me is Donald A. Brinkworth, general counsel of Conrail, and John T. Gorman, director of the Employment Assistance Program which deals with the alcohol and drug problem.

Over there unpackaging some exhibits is Alan Fisher, director of operating rules. He has charts, copies of which have been distributed, I think.

I am Richard B. Hasselman, Senior Vice President of Operations of Conrail.

On behalf of everyone at Conrail I must tell you that we are personally saddened by the January 4 accident and the anguish it has caused to so many people. We are also saddened professionally by this accident because we have worked very hard to develop and continually improve our performance as a railroad.

As you may know, our safety record for 1984 and 1985 was second-best among the major U.S. railroads in employee safety, and we expect to be in that same position when 1986 results are announced by the association of American railroads.

As for the accident of January 4, Conrail has fully cooperated with the ongoing investigation by the National Transportation Safety Board, the Federal Railroad Administration and Amtrak, providing those entities with all available information in a timely and complete manner.

We also have complied with the National Transportation Safety Board's request that no information be released to the news media and public except through NTSB.

Senator LAUTENBERG. If you could hit the high points quickly.

Mr. HASSELMAN. This chart runs from midnight to midnight. Black lines are the number of Amtrak trains that pass a location in the corridor during any hour.

I am sorry, the black lines are the Conrail trains. Between 12 and 1 a.m. are two Conrail trains. You will see they are bunched between midnight and 6 and after 8 p.m. The gray lines are the Amtrak trains which principally operate in the daytime.

I would like to say a word about the National Transportation Safety Board recommendation. NTSB has recommended Amtrak immediately initiate a program which will assure all locomotives operating in the corridor are equipped with a device which will control the train automatically as required by signal if the engineer fails to do so.

There are, unfortunately, serious questions as to whether this is a practical recommendation for freight trains.

Either the speed control system or automatic train stop system is unsatisfactory for freight train application because both systems require extraordinary train braking procedures which can easily result in freight train derailments.

Such braking procedures can result in trains breaking in two or buckling and derailing onto adjacent tracks.

As a result either of those proposed safety devices could create far more serious problems than those which it's contemplated they would solve.

However, Conrail will work with Amtrak, FRA and NTSB to see whether these problems can be resolved or whether a more suitable alternative can be revised.

PREPARED STATEMENT

Senator LAUTENBERG. Mr. Hasselman, I would ask you to submit the rest of your testimony which we will take into the record because we are just going to be out of time. We have people behind you and want to hear from Mr. Claytor and other witnesses.

Thank you, very much.

[The statement follows:]

STATEMENT OF RICHARD B. HASSELMAN

I am Richard B. Hasselman, Senior Vice President-Operations, Consolidated Rail Corporation, Philadelphia. In this position, which I have held since 1976, I am responsible for all train operation, engineering and maintenance functions of the railroad, including safety and operating rules. Accompanying me today are Donald A. Brinkworth, General Counsel of Conrail and several members of my staff.

On behalf of everyone at Conrail, I must tell you that we are personally saddened by the January 4 accident and the anguish it has caused to so many people.

We are also saddened professionally by this accident, because we have worked very hard to develop and continually improve our performance as a railroad. As you may know, our safety record for 1984 and 1985 was second-best among the major U.S. railroads in employee safety, and we expect to be in that same position when 1986 results are announced by the Association of American Railroads.

As for the accident of January 4, Conrail has fully cooperated with the ongoing investigation by the National Transportation Safety Board, the Federal Railroad Administration, and Amtrak, providing those entities with all available information in a timely and complete manner. We have also complied with the National Transportation Safety Board's request that no information be released to the news media and public except through the NTSB.

The Northeast Corridor is owned, operated and maintained by Amtrak. Conrail is one of Amtrak's several tenants in the Corridor, under terms of a contractual agreement. Conrail has the right to operate its freight trains over most of the Washington-Boston corridor and its branches to Springfield, MA and Harrisburg, PA. As a corollary, Amtrak employees operate Amtrak passenger trains over various lines owned by Conrail, under similar contractual agreements.

EMPLOYEE TRAINING AND MONITORING

Let me describe the manner in which Conrail trains its employees -- particularly locomotive engineers -- and monitors their subsequent performance to ensure compliance with operating rules and procedures.

Before an employee can become a locomotive engineer, he must attend a six-month engineer training program. That program involves about eight weeks of classroom work on operating rules, including signal indications, train handling, locomotive operation, air brakes, and other important items. The other eighteen weeks involve actual experience in locomotive operation, in the employee's' assigned territory, working with highly experienced engineers selected for that purpose, and under the periodic supervision of the Division Road Foreman in charge of that territory. Following this six-month training, the individual is given an examination by the Division Road Foreman to determine whether he is fully qualified to become a locomotive engineer. This process involves written testing, in addition to actual performance observations.

Once qualified, all Conrail train and engine operating employees are examined annually on the operating rules, and biennially on air brake rules and practices. During recent years, these tests have been written.

Perhaps even more important than the written tests is Conrail's Operating Rule Observation System for monitoring employee performance and rules compliance. In 1986, under this system, 536 Conrail supervisory officers monitored the performance of 8,785 train and engine employees, including all 3,001 locomotive engineers. The monitoring process involved a total of 870,602 individual rules observations -- the majority of which were made without the employee's knowledge. These included 255,978 observations of engineers on a variety of applicable rules, including 130,684 instances of signal compliance.

Conrail's Rule 285 -- the approach signal -- applies to all employees in the locomotive cab. During 1986, 75,785 individual observations were made of this rule. Those tests developed compliance failures in only 42 cases - or less than 1/10 of 1%. Disciplinary action was taken in those and in all such cases. I believe this shows a good record of performance, and is one of the reasons behind our good safety record.

Conrail's operating rules observation and testing program is on file with FRA and I understand they consider it to be one of the best in the industry. I understand that Amtrak has a similar program, by which they monitor the performance of all employees who operate in the Northeast Corridor, including employees of Conrail. As you may know, it is the responsibility of the owner of any line of railroad to monitor the performance of all personnel who operate on that railroad, including employees of tenant railroads.

During the past 15 months, Conrail supervisors made observations on engineer Gates on 8 dates. These observations involved 42 signal rules, 12 speed and 23 other rules. While checks of employees within the Northeast Corridor are the responsibility of Amtrak, Conrail supervisory officers also make such checks whenever they ride on or otherwise observe Conrail trains in the Corridor. During the 15-month period described earlier, Conrail supervisors observed engineer Gates' performance at various points within the Northeast Corridor -- including at Gunpow on June 23, 1986 -- and he was found to be in compliance in all of these observations. During the same 15-month period, brakeman Cromwell was observed on 3 dates, involving a total of 25 operating rules of which 14 were signal rules, 10 speed, and 1 other rule, all of which showed compliance. (The observer did record one instance in which there was a broken coupler knuckle, however this was not a rule violation, although it was initially miscoded as a speed violation.) One of the checks, on September 6, 1986, involved speed at "Gunpow", and found him to be in compliance.

ALCOHOL AND DRUG AWARENESS

As to alcohol and drug awareness, since June 1983 Conrail has been conducting a" Management Awareness Program" with its supervisory officers. This is a two-day program designed to provide current facts on alcohol and drugs, to demonstrate behavior which may indicate use of alcohol and/or drugs, and to instruct supervisors how to respond when such behaviors are encountered. As of December 31, 1986 a total of 1,770 personnel have been trained in this program.

Subsequent to the promulgation of FRA's new Federal Rules on alcohol and drug use, Conrail has developed a four-hour "Refresher Course" for personnel who have already attended the two-day program. This refresher covers the additional FRA material and both programs have been approved by FRA.

On January 4, 1987 when Messrs. Gates and Cromwell were reporting for work at Conrail's Bay View Yard in Baltimore, they were observed by Trainmaster George Mince. Trainmaster Mince, who participated in Conrail's two-day awareness program in August, 1986, conversed with Messrs. Gates and Cromwell while they were making copies of a Bulletin Order. Mr. Mince was within two feet of Messrs. Gates and Cromwell and took no exception to their condition.

Subsequent to the accident, Trainmaster Mince and four other Conrail supervisors, all of whom had attended Conrail's two-day drug and alcohol awareness program during 1986, had occasion to scrutinize Messrs. Gates and Cromwell, and again took no exception to their condition, except to observe that they were shaken by their experience. All of this suggests that personal observation, even when made by supervisors who have received training in this matter, is simply not adequate to detect drug use. This means to me that some additional procedures are probably necessary, if any employer is to identify employees who use these illegal substances.

CONRAIL'S USE OF THE NORTHEAST CORRIDOR

One of the issues raised subsequent to the accident involves the use of the Corridor for both freight and passenger trains. As you know, that issue is not new. Conrail's predecessors owned the Northeast Corridor and operated both passenger and freight service on it for more than one-hundred years, with relative safety.

Conrail uses the Corridor for two reasons -- first, to reach points which are served only from the Corridor and second, as a route to connect major cities -- particularly those between Washington and Newark, New Jersey. I am restricting my remarks to that portion of the Corridor.

I have prepared a chart which shows the Corridor between Washington and New York. The numbers opposite the names of principal locations represent the approximate 1986 carloads of traffic destined to or from customers at those points. The total of all these numbers represents 638,000 annual carloads.

A few of the numbers are shown with a black background. Conrail can handle part of those 248,000 carloads via alternate routes, in fact, we already use alternate routes for some.

The balance of the traffic local to the Corridor totals 390,000 annual carloads. It is impossible for Conrail to reach most of these points via any alternate route. The traffic involved is of a wide variety, including food products, groceries, coal, grain, automobiles and parts, steel, chemicals, piggyback traffic, mail, etc. It is, therefore, essential that Conrail continue to operate in the Corridor, in order to provide rail freight service to this sector of the Northeastern United States.

I have prepared a second chart which illustrates Conrail's through freight train operation in each major segment of the Washington-Newark corridor. The numbers with black background are the number of average daily through freight trains operated in 1977, while the lower numbers are those operated in January 1987. The chart also shows alternate routes of Conrail, as well as the Washington-Philadelphia route of CSX.

You will note that we are operating substantially fewer trains in the Corridor in 1987, than we were in 1977. For example, between Trenton and Newark, NJ, the number of scheduled freight trains has been reduced from 30 a day to 6 a day. Most of these reductions represent diversions to Conrail's alternate routes, which have been extensively rehabilitated since 1977. The remaining 6 trains -- three in each direction -- are necessary to handle our mail and parcel traffic to/from our Newark and Philadelphia piggyback terminals, to service automotive assembly plants at Metuchen and Linden, and to reach other customers not served by other routes.

Conrail has several incentives for diverting traffic from the Corridor. From a service viewpoint, the alternate routes circumvent the delays, which are regularly encountered in the Corridor. And, from an economic point of view, the alternate routes avoid our paying Amtrak the extremely high trackage charges of 52-1/2 cents per car mile.

Between Philadelphia and Washington, we are confronted with a more difficult situation than that north of Philadelphia. In 1986 we rerouted two daily trains to the CSX route between Philadelphia and Potomac Yard. In 1987, we plan to reroute four additional daily trains to that CSX route.

However, when that has been done, we will still have six daily trains in the portion of the Corridor between Perryville and Baltimore. Those trains use Conrail's Port Road Branch between Harrisburg and Perryville, enroute to Baltimore and Washington. It is not feasible to operate them via the CSX route between Perryville and Baltimore because no suitable connection exists at Perryville.

In summary, then, Conrail has already diverted substantial freight traffic from the Northeast Corridor and continues to seek means of diverting further traffic, however it is apparent that it is impossible to divert all such traffic.

Conrail has attempted to schedule its freight trains during night hours to the extent possible. I have prepared a chart which shows the number of scheduled Conrail trains and Amtrak trains during each hour of the day, from midnight to midnight, passing Gunpow. You will note that no freight trains are scheduled at this point between the peak passenger hours of 6 a.m., and 7 p.m., and most freights operate at night. In addition, Conrail operates two to four unscheduled trains here daily, usually at night.

SAFETY DEVICES

The movement of Conrail locomotives, on January 4, was governed by a number of safety devices. The most important of these was the wayside signal system which was approved by FRA before installation.

The second safety device is the cab signal system on the locomotives. That system is specifically intended for high-speed operations, such as the 125 MPH passenger trains on the Corridor. While not as important for 50 MPH freight operations, it is, nevertheless, available to those trains.

The third safety feature is the cab signal whistle, which is designed to sound whenever the cab signals change to a more restrictive indication, and continues to sound until the engineer operates an "acknowledging" device.

The fourth safety device is the "Dead Man Control" which requires that a foot valve be continuously depressed while operating the locomotive.

According to engineer Gates, all of the safety devices on the locomotive were found to be operative before his departure from Baltimore. While engineer Gates' testimony indicates that the cab signal whistle sounded at the time he performed his tests at Baltimore, the whistle was found to be plugged by tape when the locomotive was inspected some 25 hours after the incident. If this condition had existed at the time of the departure test, engineer Gates would have been aware of the fact that the whistle was inoperative and presumably taken steps to have it corrected as the rules require. Post accident inspection also found that the bulb had been removed from the "Approach" indicator of the cab signal device. However this simply means that the cab signal would be interpreted as "Restricting", rather than "Approach".Since "Restricting" is a more restrictive indication than"Approach", this would not detract from operational safety. Even so, Conrail rules require that all features of the cab signal system work properly, at time of the pre-departure test. If the bulb had been missing at that time, it could have easily been replaced.

NTSB RECOMMENDATION

On January 15, 1987, NTSB recommended that Amtrak "immediately initiate a program which will assure that all locomotives operating on the high-speed passenger train trackage of the Northeast Corridor are equipped with a device which will control the train automatically as required by the signal if the engineer fails to do so." There are serious questions as to whether this is a practical recommendation for freight trains. Either the speed control system, or the automatic train stop system which is presumably being suggested by NTSB, is unsatisfactory for freight train application because both require extraordinary braking procedures which can easily result in freight train derailments. A study on such braking procedures, prepared by a special task force for the Railroad Safety Board of the Federal Railroad Administration on July 3, 1980, concluded that "freight train braking using full service application ... produced drawbar forces exceeding the safety limit of drawbars on some trains simulated. On other trains, the drawbar forces generated were close to the critical value of 250,000 pounds." Such conditions can result in trains breaking in two or buckling and derailing onto adjacent tracks. As a result, either of these proposed "safety devices" could create far more serious problems than those which it is contemplated to solve. However, Conrail will work with Amtrak, FRA and NTSB to see whether these problems can be resolved, or if a more suitable alternative can be devised.

The proper braking of freight trains requires the skilled hand of a qualified locomotive engineer. As yet, no device has been developed which can safely automate this function.

ALTERNATE RECOMMENDATION

What is needed, as I see it, is a system which will insure that none of the present safety devices are nullified or made inoperative. We have heard of occasional instances in which cab signal whistles were found to have been plugged, so they could not sound. This presumably is done because the whistle presently used emits an extremely shrill tone. I think it will prove far more effective to correct this condition, by providing an electronic warning signal (which will be less irritating but equally audible) and to install this warning signal so that it cannot be nullified or disabled. I am having a study made of this alternative and urge NTSB, FRA and Amtrak to give it primary and serious consideration.

Such a system will, in my opinion, provide increased safety for the operation of freight trains in the Northeast Corridor. These freight trains do not have the same extremely high-speed environment which exists in passenger service.

Let me reiterate our concern and regret regarding the January 4 accident and let me pledge Conrail's commitment to any reasonable approach which will contribute to increased rail safety.

STATEMENT OF MR. CLAYTOR

Senator LAUTENBERG. Mr. Claytor.

Mr. CLAYTOR. Thank you, very much, Mr. Chairman.

First, I would like to introduce Mr. Henry Moore, our executive vice president and chief operating officer, and Mr. Dennis Sullivan, vice president of operations.

Senator LAUTENBERG. Do you want them to join you?

Mr. CLAYTOR. No; they will sit right behind me. They, as well as a number of other senior operating officers, are here to help answer questions.

Senator LAUTENBERG. Fine.

Mr. CLAYTOR. I assume my prepared statement will be submitted for the record.

Senator LAUTENBERG. It will.

Mr. CLAYTOR. We at Amtrak are deeply grieved at the loss of life to both passengers and employees, but I appreciate the opportunity to testify before this committee, because I think this is an excellent opportunity for all of us to try to see how we might avoid future accidents such as this.

CAUSE OF ACCIDENT

In order to really evaluate that, we do need to understand what went wrong to cause this. Unhappily Amtrak, like its crew and passengers, was the victim, not the perpetrator of this disaster.

I also want to mention that I agree fully with Senator Mikulski that the enormous aid received from Chase, Md., and the vicinity was of great assistance to us and all of our passengers.

I refer not only to the medical aid, police and fire aid, the other emergency aid which was efficient and fast, but to the people who lived in the vicinity who came out and helped in every way they could. It was really a great experience in humanity.

Now, Mr. Riley has given a brief summary of what really went on.

While I would like nothing better than to take that step by step and go right through it as I have in my prepared statement, I will forgo that and merely say that I am satisfied after many, many years in the railroad business and in investigating train accidents that in this case there was no question about the sole cause of this accident. It was a whole series of rule violations, not one or two but a whole series that caused this train to go onto the track in front of our train.

The sad thing is that almost any one of those rules, if any one of those rules had been complied with, it would have avoided the whole thing. So we had a combination of those things.

I think the system we have was designed to prevent just this sort of accident, but it was overwhelmed by a whole series of successive failures. Still, we have got to see how to stop that, too. That is what I think we need to try to do here.

I will just turn then to what I think are some of the preventive measures, and I am sure we will get into it in more detail on the questions.

First, we agree, in fact it was my idea before I read the NTSB's recommendation, we agreed that Amtrak's speed control system needs to be applied to all users of the high-speed Washington-to-Boston corridor. I think I have to explain these devices briefly, or it will not be possible really to understand this.

There are several levels of train controls available, and there is lots of confusion in terminology when people talk about them.

The first is what was on the Conrail engine. In cab-controlled territory, that is, territory in which the signals are displayed inside the cab as well as outside, there is a whistle that goes off whenever a signal changes as you move from a signal that is less restrictive to one that is more restrictive.

In other words, when you pass one that says you have to slow down or stop, the whistle goes off. What the engineer has to do is press a button. That stops the whistle. That means he has acknowledged it and now recognizes that he has got to do something.

From then on he is in charge. The engineer has either got to slow down or do whatever he needs to do, but it's in his hands. The system has been satisfied.

The second system, the automatic stop system, has exactly the same thing except when the—if the engineer fails to acknowledge the whistle by pressing the button, after a very few seconds the brakes are put on and the train automatically stopped.

If, however, he does press the button and acknowledge, it's exactly the same as the previous system. It is then up to him to slow down or not as he chooses.

In our opinion on the corridor neither of those systems is satisfactory, because I think if you have an engineer who is impaired for any reason, he's conscious and has enough sense to press the button but otherwise decides he doesn't want to pay attention, the train is going to go right on. He's in complete charge.

AUTOMATIC TRAIN STOPS

Under our system which is sometimes called the automatic train stop or ATS system, we call it the automatic speed control system, what happens is, this is on all Amtrak locomotives and a number of others, if you cross into a more restrictive signal area, the whistle goes off. The engineer then has I think on Amtrak, 6 seconds to move his brake into a position called suppression which automatically puts a modest amount of brake on the train and starts to slow it down.

If as was the case here he should have slowed down to a maximum speed of 30 miles an hour, he's got to leave that brake on until the speed is down to 30 miles an hour.

If he takes the brake off the train immediately is stopped by the device. If while that signal aspect is in place he speeds up at any time above 30 miles an hour, the system takes over and stops the train.

Now, that, we think, is really effective. If that had been on this engine, this could never have happened. About three different times it would have stopped the train.

So we think that device ought to be required on all rail traffic in our main line from Washington to Boston. That means that where we have high-speed passenger trains and commuter trains mixed with freight trains, all should have it.

Now, it's simple to say that; it's complicated to effect it. I will not stop now to discuss the problems that Mr. Hasselman raised about how this is dangerous for freight trains.

You do not have to have the same system on a freight train precisely that you have on a passenger train. Instead of 6 seconds, he can have much more time, the freight train is running much slower.

He can have an arrangement that permits him to use small brake applications, not just a single one that will enable him to bunch his slack so that the train is not suddenly stopped.

Senator LAUTENBERG. We will leave those technical——

Mr. CLAYTOR. I say there is an answer to that, and we can work that out in due course. But we think it ought to be there.

Now we have not just freight to worry about, we have the Delaware and Hudson freight and the Conrail freight on the line south of New York. We also have three commuter agencies, Maryland DOT, SEPTA in Philadelphia and New Jersey Transit.

Maryland is completely equipped. All of their equipment on our corridor has the same equipment we have.

New Jersey Transit has its new locomotives and new cab cars equipped, but all of their multiple unit cars, that is, the great bulk of their commuter cars, have only the automatic train stop, the one that will stop the train if he doesn't recognize the signal but which then no longer takes control.

The same is true of all the SEPTA equipment. I think all of that commuter equipment needs to be equipped with automatic speed control too, and I would recommend that UMTA ought to help in the cost of doing this.

Now, if you already have cab signals on all of your trains, which all of these do, the cost per unit we estimate at about $25,000.

Senator LAUTENBERG. Per engine?

Mr. CLAYTOR. Yes, per control unit, that's right, per engine or per control car, to equip that with our speed control system.

When you get north of New York you have a slightly different problem. Metro North runs the line to New Haven. Their equipment is already equipped, but Conrail has freight up there that has only automatic train stop on Metro North, which again is not enough.

When we go east of that we have more freight on the Providence & Worcester Railroad and Conrail, that needs to be equipped.

Senator LAUTENBERG. A variety of users?

Mr. CLAYTOR. Just those two besides Amtrak. East of Providence, Massachusetts Bay Transportation Authority has all of their equipment properly equipped with speed control between Boston and Providence.

Senator LAUTENBERG. So those are commuters.

Mr. CLAYTOR. That's the scope of the problem, Mr. Chairman.

Senator LAUTENBERG. Mr. Claytor, we are going to run out of time totally. I would just like to reserve a few minutes for my colleague and I to ask you some questions.

Mr. CLAYTOR. Right.

Senator LAUTENBERG. Unless you have—unless you have one more quick thing, please.

Mr. CLAYTOR. Ten seconds and I will take care of it.

REMOVING FREIGHT FROM CORRIDOR

I feel that there is a more important alternative than that, which is to reduce, eliminate the freight on our high-speed corridor that operates intermingled with our high-density, high-speed trains.

That can be done by a combination of moving them to parallel lines as has already been stated by Mr. Hasselman.

The freight that cannot be moved on parallel lines can be operated between 10 p.m. and 6 a.m. with our dispatcher working so that no freight train ever has to pass, be moving alongside a fast passenger train.

That is what I think is the answer. The combination of hours of operation and moving the through freights off.

The problem at Perryville can be taken care of by a rather modest connection from our line over to the CSX line 2 or 3 miles South of

Perryville where all of these trains could come on our railroad for 3 miles and go back over.

That can be handled even in the daytime by our dispatchers by arranging to have those trains go through when there are no passenger trains going by.

In other words, this can be handled. But the reason we must come off the corridor instead of just having the speed control is the problem of a freight derailment, not a collision.

But a freight derailment which spills over tracks, we have had about six of those in the last 3 or 4 years all of which we were lucky, we had nothing coming, but any one of which could have produced just the kind of disaster we have today.

Thank you, Mr. Chairman.

PREPARED STATEMENT

Senator LAUTENBERG. Thanks very much, Mr. Claytor.

I am sorry to rush you and your colleagues because you do have a lot of information that is of value to us. But, nevertheless, as we examine the record, you know your full statement will be there.

And perhaps there will be questions submitted. I know Senator Kasten indicated to me he would be submitting questions, and he would like an answer in writing.

Mr. CLAYTOR. Yes, sir.

[The statement follows:]

STATEMENT OF W. GRAHAM CLAYTOR, JR.

All of us at Amtrak are deeply distressed about the tragic accident that occurred on January 4, and our hearts go out to the families of those who lost their lives as well as to those who suffered injuries. I appreciate very much, however, the opportunity to appear before this Committee to assist in evaluating what went wrong and to discuss what action is being or could be taken to prevent this type of disaster from occurring again. As I shall try to make clear in this testimony, Amtrak, like its passengers and crew, was the victim, not the perpetrator, of this unfortunate accident.

First, let me briefly summarize what went wrong in the operation of the Conrail locomotives and what resulted from this, and then what Amtrak's conduct in connection with the accident was and, again, what resulted from this. I will then discuss for consideration some action that might be taken to prevent this sort of disaster in the future.

I

Three Conrail diesel freight engines coupled together without any cars behind them were being moved from Conrail's Bayview Yard to Harrisburg. This included a movement over Amtrak's NEC main line from the terminal just north of Baltimore to Perry Interlocking, across the Susquehanna River from Havre de Grace, Maryland, a distance of 29.8 miles. When running over Amtrak tracks, Conrail crews are required to comply with Amtrak's operating rules.

The crew consisted of an engineer and brakeman, both of whom were in the cab of the leading locomotive. Under both Amtrak's and Conrail's rules, the movement was under the control and responsibility of the engineer.

Conrail locomotives operating over Amtrak's lines are required to be and are equipped with "cab signals" -- that is, signals displayed in front of the engineer inside the locomotive cab that are comparable to the wayside signals. These locomotives are also equipped with a warning whistle, called an "audible indicator," that sounds whenever the applicable wayside or cab signal changes to a more restrictive indication of any sort. Amtrak Rule 550 requires that both of these devices must be tested before the engine leaves its terminal, and if either device is not working properly, the engineer must not enter cab signal territory. All of Amtrak's NEC main line between Washington and Providence, Rhode Island is cab signal territory.

While the engineer and brakeman later stated that, in the absence of mechanical people they had made the required tests, in fact, neither device on the leading locomotive was working. The light bulb was missing in a most critical aspect of the cab signal indicator, and the warning whistle had been taped up by someone so that it could not be heard when the engine was running. It was a violation of Amtrak's and Conrail's rules for these engines to leave the terminal at all with these defects, either without a proper test of these devices, or knowing that they were not working. This was the first of several independent and serious rule violations leading to the accident.

The engines were proceeding north on track #1 of Amtrak's four-track main line. At Gunpowder Interlocking, these tracks are reduced to two in order to cross an estuary of Chesapeake Bay, and at this point track #1 terminates through a switch into track #2. (See track diagram, Attachment 1.) This switch was and had for several hours prior to the accident been set to handle through high-speed traffic on track #2, and, accordingly, was set against entry on this track from track #1. A wayside "home" signal 349 feet south of this switch controls northbound traffic on track #1, and was set at "Stop." Another wayside "distant" signal 1.95 miles further south on track #1 registered "Approach," an aspect that instructed trains on track #1 to:

> "Proceed prepared to stop at next signal. Train exceeding medium speed (30MPH) must at once reduce to that speed."

All of these signals were subsequently checked and tested by Amtrak and FRA as part of the National Transportation Safety Board (NTSB) inspection and found to be working properly. The subsequent statement of the Conrail engineer to the effect that both this signal and the cab signals indicated an "Approach Limited" aspect are not credible under the circumstances. If an "Approach Limited" aspect had been displayed, it would have indicated that the route was clear to turn into the adjacent track #2 after the next signal at a speed of no more than 40MPH.

When the Conrail engines passed this "distant" signal, they were running at or slightly above the maximum speed permitted for this class of locomotives coupled together, 60MPH. In spite of their subsequent statements, the engineer and brakeman either did not observe this signal, which certainly indicated "Approach," or they disregarded it and continued at the same speed, a violation of Signal Rule 285. The brakeman stated that he did not observe this wayside signal at all, even though he claims to have subsequently seen and reported a comparable aspect on the cab signal. In any event, when passing this signal, they violated another rule, Rule 34, which requires them to communicate to each other the indication or aspect of each applicable signal they pass. These were the second and third rule violations leading to the accident.

On passing this signal, the warning whistle in the cab should have sounded, and the cab signal should have changed from the previous "Clear" aspect to "Approach." Since both the warning whistle and the "Approach" aspect of the cab signals had been neutralized, one by the taping up of the whistle and the other by the missing light bulb, neither was actuated. What obviously did happen, however, was that the cab signals "went dark" -- that is, the light behind the previous "Clear" aspect went out, and no other aspect appeared because the light bulb was missing from the "Approach" aspect which otherwise would have been lighted.

Under Amtrak Rule 551(g)(4), this constituted a failure of the cab signal apparatus, and under Rule 554, this occurrence alone would have required the engineer to reduce speed to no more than 40MPH and to notify the dispatcher or operator by radio. The fourth successive rule violation occurred when neither of these actions was taken, and the engines continued at or above 60MPH.

At a point 4,000 feet before the "Stop" signal mentioned above was reached, the locomotives passed a further safety device in the track that actuated the most restrictive of the cab signals, an aspect called "Restricting." Tests proved that this aspect of the locomotive's cab signals was working properly. This would also have again actuated the warning whistle if it had not been neutralized by tape. Under Rule 551(c), when a "Restricting" signal appears on the cab signals, "the Engineer must take action at once to reduce train to Restricted Speed," which for this location is defined as not to exceed 20MPH. Again, the engineer subsequently stated that, prior to reaching the next or "home" wayside signal, his cab signals were all dark. In fact, as noted above, they were undoubtedly dark from the time he passed the distant signal until the "Restricting" cab signal appeared. In any event, the fifth successive rule violation occurred when both members of the crew also failed to respond to this critical signal.

Finally, tests which were made with similar engines after the accident indicated that, under weather conditions like those on January 4, the wayside "Stop" signal could be seen and recognized at a distance of 5,178 feet, more than twice the distance required to stop with normal brake application and without applying the brakes in emergency, even at the 60+ MPH speed the engines were running. This was the crew's last clear chance, and they again failed to act, in violation of "Stop" Signal Rule 292, until they were so close to the "Stop" signal and switch that, in spite of a last minute emergency brake application, the engine slid past the signal and through the switch directly into the path of our "Colonial," northbound Train #94. This sixth rule violation finally made the disastrous collision unavoidable.

This combination of violations successively of six different operating rules, compliance with any one of which could have avoided the accident, can possibly be explained but in no way justified by the finding that positive drug test results for marijuana constituents have now been returned on both men in the Conrail engine crew.

II

I turn now to what Amtrak did in this connection. I am distressed to say that Amtrak violated an FRA rule before the accident and is charged with violating another FRA rule after the accident. Neither of these, however, could have contributed to causing this disastrous collision to take place.

Amtrak operates two classes of passenger cars east of Chicago -- Amfleet and what we call Heritage cars. The Amfleet cars were specially designed for high-speed NEC service; the Heritage cars, although modernized and largely rebuilt, were inherited from the passenger railroads when Amtrak was formed in 1971.

FRA allows a maximum speed of 125MPH for trains with Amfleet cars, but only 110MPH for those with Heritage cars; Amtrak itself limits trains containing these latter cars to 105MPH. The train involved, the "Colonial" (#94), normally carries only Amfleet equipment, and so is usually authorized a maximum speed of 125MPH by both FRA and Amtrak. On January 4, however, a single Heritage coach near the end of the train was added at Washington because of the unusual holiday traffic, in an effort to avoid or limit requiring passengers to stand. Our conductor states that, as required, he notified our engineer of this, but since the engineer was tragically killed in the accident, it has been impossible to verify this. Our examination of the speed tapes indicates that when the train approached the accident scene it was, nevertheless, running at just under 125MPH -- the authorized speed for Amfleet cars on this segment of track, but in excess of both the FRA and Amtrak limits for trains with Heritage cars.

These speed restrictions with respect to Heritage cars were wisely imposed out of an abundance of caution with respect to cars not originally designed for operation at higher speeds. While the presence of one Heritage car near the back of the train made operation at its usual speed a technical violation of both Amtrak and FRA regulations, the car in fact operated perfectly and in no way contributed to the collision with the errant Conrail locomotives. While in my view it was a mistake in judgment to put the Heritage car on this train in the first place, and obviously a further mistake by the engineer not to have limited its speed in accordance with regulations once it was there, these actions were irrelevant in any determination of the causes of the accident.

Amtrak has also been charged with failing to comply with other FRA regulations requiring drug and alcohol tests of train personnel after this kind of accident. In fact, our senior officers at the scene did make certain that such tests were made on the Conrail engineer and brakeman, on the deceased Amtrak engineer, and on the tower operator who controlled the signals and switches involved. All of these Amtrak employees tested negative for both alcohol and drugs. The Amtrak officers, however, did not order such testing of our train's conductor (who had been removed from the scene on a stretcher) and two assistant conductors for two reasons: it was plain that they could not have contributed in any way to the accident because they were busy inside the train collecting tickets, and since they were injured and in shock, it was only compassionate for them to be treated and released as quickly as possible. Our people on the scene erroneously believed that this was appropriate. In fact, they had been furnished a card prepared by the Amtrak and FRA staff jointly which inadequately summarized complex regulations governing post-accident testing, and which under the circumstances was misleading.

In any event, steps have now been taken to clarify these instructions and to make sure that no such mistake is made in the future.

While the National Transportation Safety Board does not normally make definitive findings on the cause of rail disasters until many months after the start of its investigation, we believe that in this case the evidence is overwhelming that the sole cause of the accident at Gunpowder Interlocking was the outrageous conduct of the Conrail crew in violating not one but a whole series of important operating rules, each of which was designed to prevent just this sort of thing from happening.

III

I would like now to turn to the more important question of what we can or should do to prevent this sort of accident in the future.

As already noted, the system now in effect would have effectively prevented the accident in spite of any two or three serious failures, but it was overwhelmed by an almost incredible series of successive rule violations involving both members of the Conrail engine crew.

All Amtrak passenger locomotives and self-propelled cars operating on the NEC are equipped with automatic speed control devices which, when activated, will bring the train to a stop.

There are currently in use on various railroads a number of train control devices, with no universally accepted terminology. The least effective is the warning whistle device that was installed on these Conrail freight locomotives; when the applicable signal changes to a more restrictive aspect, the whistle sounds and continues to sound until the engineer acknowledges it by some action such as pressing a button. Thereafter, it is up to the engineer manually to adjust speed, stop or continue as before.

The Automatic Stop System is similar except that if the engineer does not acknowledge the warning device within a short time, the locomotive is automatically brought to a stop. Again, however, if the engineer acknowledges the warning, the train continues at the same speed until he manually slows or stops it.

Finally, the Automatic Speed Control (sometimes called Automatic Train Control) System will automatically apply the brakes and bring the train to a stop unless the engineer within a short time (on Amtrak, about 6 to 8 seconds) takes action to bring the train's speed down to or below the limit called for by the signal indication. It is this device with which all Amtrak passenger engines operating on the NEC are equipped.

Had this device been in place on the Conrail engines, it would effectively have prevented this accident in spite of the multiple man-failures encountered. The first and most obvious preventive action I would recommend, therefore, would be to require all freight and commuter equipment operating on the high-speed NEC main line from Washington to Boston to be equipped with these automatic speed control devices. I am pleased that the NTSB is also recommending this.

Amtrak management has already taken the first step toward insuring that all trains operating on the NEC are so equipped by ordering that these devices be acquired and placed on all of Amtrak's work train locomotives -- the only Amtrak road engines assigned to the NEC that are not now so equipped. Pending completion of installation of these devices, Amtrak work equipment will be limited to 30MPH. We are also issuing instructions that our terminal switch engines, without such equipment, are not to be operated outside their terminals except on those very rare occasions when they may be required to rescue a disabled train, and even here may not be so used unless in charge of a qualified supervisor and with notice to the dispatcher.

When we look at the other trains being operated on the NEC, however, the situation becomes quite complex. Between New York and Washington our lines are used by Conrail and Delaware & Hudson Railroad for freight, and by New Jersey Transit, SEPTA and MARC (Maryland DOT) commuter trains. All MARC locomotives on NEC are equipped with Automatic Speed Control; some NJT equipment has Automatic Speed Control, and the rest has only automatic stop; SEPTA equipment has only automatic stop. Conrail and D&H freight locomotives here similarly do not have Automatic Speed Control or stop equipment, but only the type of whistle warning described above.

East of New York, Conrail operates a relatively small amount of freight on portions of our line between Penn Station and approximately the New York-Connecticut State line. From that point to New Haven, Connecticut, the railroad is under long-term lease from Penn Central to the Connecticut Department of Transportation and operated by the Metro-North Commuter Railroad Company, the operating arm of New York's Metropolitan Transit Authority (MTA). I understand that Metro-North commuter trains and, of course, Amtrak passenger trains have Automatic Speed Control, but that the relatively few Conrail freight locomotives that operate on this line are equipped with automatic stop but not with Automatic Speed Control.

Moving further east, Amtrak owns the main line from New Haven to the Rhode Island-Massachusetts State line, over which at present are operated only Amtrak trains and a modest amount of freight operated by Conrail (west of Old Saybrook, CT) and the Providence & Worcester Railroad (east of Old Saybrook, CT). Both Conrail and P&W engines here have cab signals but neither automatic stop nor Automatic Speed Control.

From the Rhode Island-Massachusetts State line to Boston, the line is owned by Massachusetts Bay Transportation Authority (MBTA). These tracks are used by Amtrak's trains, by MBTA commuter trains now operated by Amtrak under contract, and by Conrail freight trains. Amtrak and MBTA trains are equipped with

Automatic Speed Control equipment. Conrail's freight engines have neither automatic stop nor Automatic Speed Control.

Amtrak claims the right to impose requirements such as the use of Automatic Speed Control devices on freight and commuter trains operating over our lines, but this has been and probably will be contested by some or all of those operators. We have, of course, no such rights with respect to those portions of the NEC not owned by Amtrak. As a result, a statutory or Federal regulatory requirement is probably the only practical way to accomplish this objective within a reasonable time.

The NTSB has also recommended interim action pending the installation of Automatic Speed Control devices that, in my opinion, would be neither effective nor practicable. The recommendation is that we require by rule all trains not equipped with these devices to stop in all cases before entering high-speed tracks and to request and receive dispatcher permission to proceed.

This rule would be ineffective because all such movements are protected by signals and if, as occurred at Gunpowder Interlocking, the engineer is so inattentive or reckless from drugs or otherwise as to disregard approach and stop signals, he quite likely will not pay attention to a provision in the rule book that says he should stop and receive permission before proceeding. On the other hand, compliance with this rule on a regular basis would tie up the railroad. It would be particularly burdensome in the heavy commuter traffic areas around New York and Philadelphia. In addition, this large number of unnecessary radio communications with already busy dispatchers would clog our limited radio channels. We would strongly oppose any such requirement.

In lieu of this interim proposal, however, we would suggest that all freight traffic (including light engines) be limited to 30MPH on the NEC main line between Boston and Washington between 6:00AM and 10:00PM, when high-speed intercity passenger and commuter traffic is heavy. From 10:00PM to 6:00AM, however, freight traffic could continue at present speeds, and our dispatchers would be instructed to stop such trains by signal when they are to be passed by the relatively few Amtrak or commuter trains then operating.

Finally, we have no objection to the NTSB's third recommendation with respect to locomotive radios. Amtrak has in effect at the present time a requirement that every locomotive leaving its terminal must have a properly installed and working standard radio transmitter and receiver, and I understand that Conrail has a similar rule (which the Conrail crew violated on January 4).

In my opinion, however, none of the foregoing goes far enough to provide a permanent solution. If we are effectively to prevent passenger train accidents caused by freight traffic on our line between New York and Washington, we must eliminate the intermixture on the same right-of-way of heavy freight trains and high-speed passenger and commuter operations. This is not only feasible but necessary if we are really to solve all aspects of this problem permanently and definitively.

Parallel rail routes between New York and Washington exist today that, with some improvements, could handle substantially all through freight movements. (See Attachment 2 for map of these lines.) North of Philadelphia Conrail owns tracks of the former Reading and Central of New Jersey Railroads, among others, that could handle through freight now using our NEC line there. From Philadelphia to Baltimore and Washington, arrangements could be made for such freights to use closely parallel CSX (former B&O) tracks.

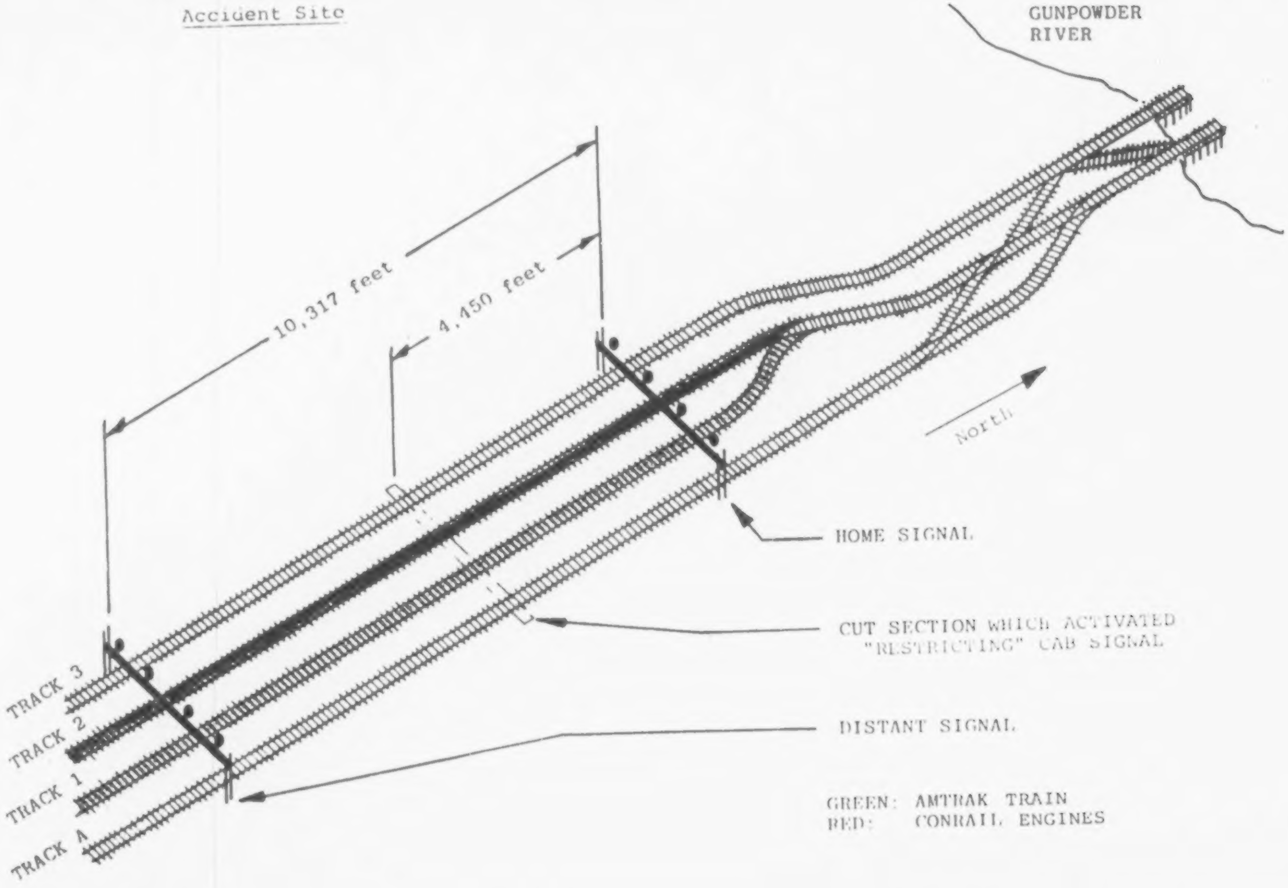
Local freight service to industries reached only by NEC tracks could be operated by Conrail each night between 10:00PM and 6:00AM, when very few high-speed passenger and commuter trains are operated. As noted above, we could also accommodate through freight traffic during these hours. In addition, if there is important freight that the freight carrier wants to move over certain short segments of our line during other hours, this could be so controlled by our dispatchers as not to move at the same time any high-speed passenger train is passing. This might include such movements as unit coal trains from Landover to Bowie, Maryland, or freight trains from the Perry (MD) Junction with Conrail's Port Deposit line to a new connection that could be built with the CSX line a few miles south of Perry.

The relatively small amount of freight on the NEC high-speed lines east of New York can probably be safely accommodated by careful dispatching and by concentrating freight movements in the night hours when high-speed passenger and commuter trains are not running. South of New York, however, where a high volume of freight traffic is intermixed with both high-speed and high-density passenger and commuter traffic, it seems to me essential to remove the bulk of the freight traffic to night operation or separate rights-of-way. There is no sure way otherwise to avoid such accidents as piggyback containers falling off of freight cars into the path of fast passenger or commuter trains, or the pile up of a freight train over adjacent passenger tracks from such causes as broken freight car wheels, etc. I urge the appropriate Congressional committees and the FRA to consider with us and the freight carriers how to bring about such separation of these two classes of traffic on the New York-Washington corridor. We will gladly work with all of these parties to achieve an equitable and practicable solution to this very important problem.

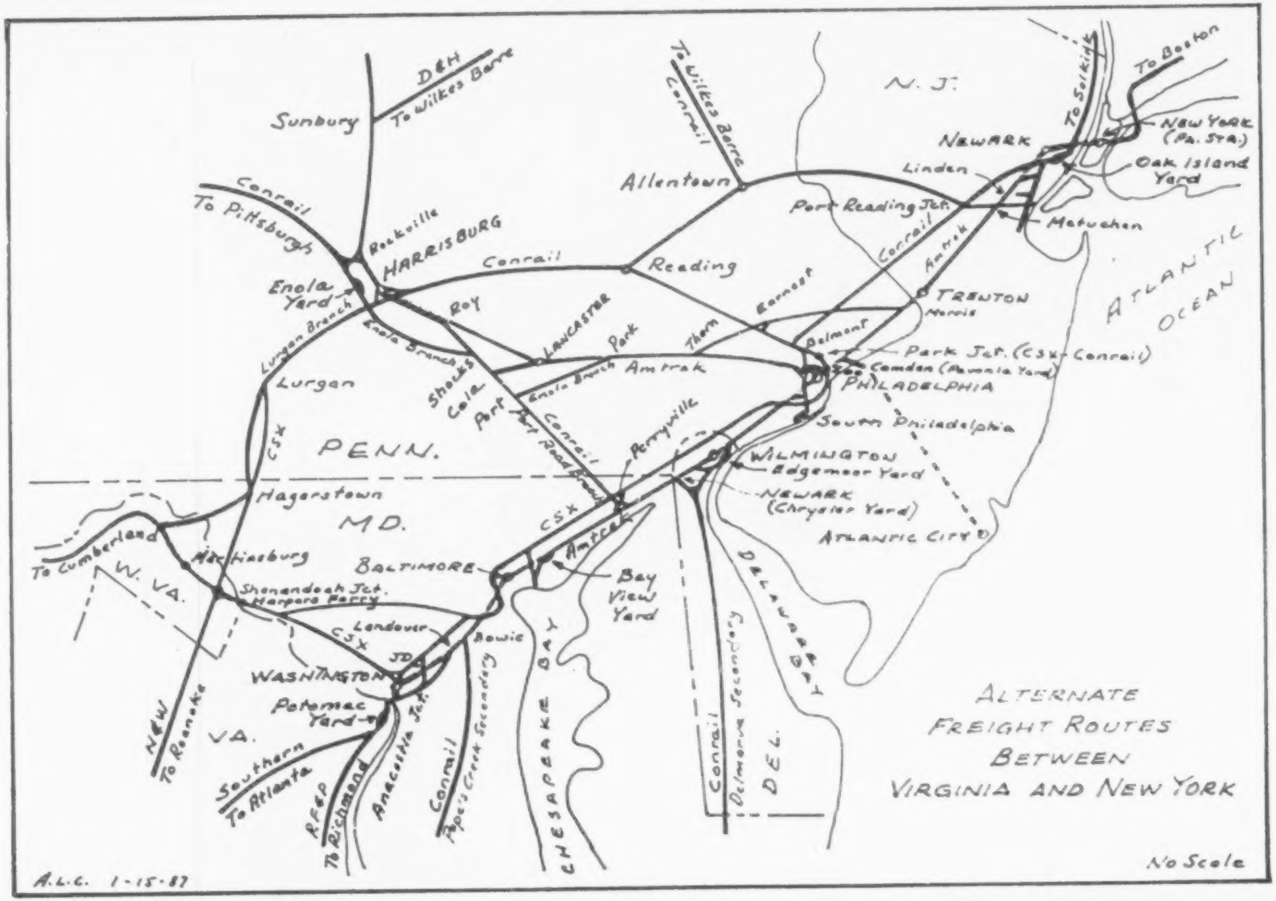
[ATTACHMENT 1]

GUNPOW INTERLOCKING

Accident Site



[ATTACHMENT 2]



HUMAN VERSUS EQUIPMENT FAILURE

Senator LAUTENBERG. I heard you say, Mr. Claytor, that there were several failures which we have observed that created the condition during which this accident took place.

Mr. CLAYTOR. Yes, sir.

Senator LAUTENBERG. But in one, if one looks through it all, there was human intervention at a time when the mechanical or electronic or communication systems were generally in good working order, signals operated properly outside the cab and within the cab other than the alerter that was tampered with.

Mr. CLAYTOR. Yes, sir.

Senator LAUTENBERG. But there were enough indications as I hear you say it that should have alerted the engineer to his appropriate response.

Mr. CLAYTOR. Yes, sir.

Senator LAUTENBERG. So then, there weren't a series of failures as I hear it, there was a single failure.

And the single failure was, in your view—please let me not put words in your mouth—the single failure was the fact that the engineer of the Conrail train chose to intervene and ignore the signals that he was getting?

Mr. CLAYTOR. Yes; except that the whistle signal which was designed to get his attention was not working, that was taped up. So that one wasn't working.

A signal did flash on his cab signal indicator in the cab, but they ignored that. They were talking to each other, thinking of something else and paid no attention.

The only way that I can really explain but not justify that combination of things that happened on that crew was that they must have been impaired as a result of the drugs that were found.

I can't see how experienced people, these were both experienced people, they weren't novices that didn't know what they were doing, experienced people with experience on this piece of railroad, and to have done the series of things that they did I think can hardly be explained any other way.

Senator LAUTENBERG. Mr. Claytor, you complimented the neighbors, the agencies responsible for handling the emergency. And I agree. I visited early the next morning and sensed the attitude and saw the expertise which was brought in there.

But as I talked to some of the people in the neighborhood I was told that particularly by youngsters who were off guard and just speaking frankly, that the people were wandering away from the train, collecting their luggage, trying to find a way to get home, Greyhound bus station, some of the neighbors actually transported them in their cars as I heard it, directly.

Mr. CLAYTOR. Right.

CREW TRAINING

Senator LAUTENBERG. It raises a question for me about the training of the crew for emergencies, whether or not they were doing the things one would have wanted, and I recognize that there is a traumatic atmosphere with something like this when it occurs, but whether or not everything was done, the awful question that is raised was, did someone get on that train in Baltimore, the last stop before the accident, if I am correct.

Mr. CLAYTOR. Yes.

Senator LAUTENBERG. Who we know nothing about, who has disappeared from the face of this earth because of the impact that one could see on that Conrail engine, which was so demolished that you couldn't tell what it was.

Mr. CLAYTOR. That is correct.

Senator LAUTENBERG. Do we know whether there are any people there who were totally unaccounted for?

Mr. CLAYTOR. We think not because they were extraordinarily careful in removing the wreckage to make certain that there were no bodies that were not found. I feel confident that was the case.

There is absolutely no way for us to account for people. This is an unreserved train, and there is no list of passengers on an unreserved train and can't be. Like all commuter trains, all of our non-Metroliner trains in the Northeast corridor except those with sleeping accommodations to Florida are unreserved.

Let me say about the crew. Our crew did, I think, what they could. But the conductor was taken away on a stretcher. The assistant conductors were badly hurt, not seriously injured but in shock. And they were sent for medical treatment.

We had some of our senior officers there as quickly as they could get there and they were taking charge of the effort to obtain, of course, we immediately ordered buses to get there as soon as we could, but there was some considerable delay. We tried to do everything we could.

But the crew is thoroughly trained in disaster operations. We have a series of programs and refresher programs for them all. And I think that this was handled as well as it could be.

Senator LAUTENBERG. I am going to defer to my colleague, but we would ask you to sit for a few minutes because there are only two of us and we will be able to perhaps go through another round of questions.

Senator D'Amato.

BUDGET BATTLE

Senator D'AMATO. Thank you, Mr. Chairman.

First, let me underscore something I believe is important indicated by Senator Weicker.

The fact of the matter is that both Amtrak and Conrail have been tremendously short-changed. Amtrak has been limping through.

We in the Northeast corridor, Senator Lautenberg and myself, have been battling. It's an annual battle.

We now have the reauthorization bill for mass transit, and it seems to me that some of our colleagues in other areas of the country should take heed. We support farm subsidy programs, $24 billion. Very little of that directly or indirectedly really comes to our states in proportion to population.

We have supported Rural Electrification programs. We have the highest rates in the country in our metropolitan regions. We support TVA, and a whole host of other programs.

I think it is rather important to note that sometimes parochial attitudes have developed and have been spawned to a great extent by this administration. I took great umbrage with Dave Stockman, who regularly assailed mass transit and said government didn't have anyplace in it and would use it as a whipping boy. We have an obligation to do more than criticize.

I think Conrail and in particular Amtrak under Graham Claytor's leadership has done an extraordinary job.

If there has been any deficiency in our overall policy, it has been in not establishing the transportation priorities that should be addressed nationally—seeing to it we have a strong transit system, not only for people and commuters, but freight as well.

It is important. We have neglected that over the years.

Having said that, let me come to a point you made that I think is important to recognize, and that is we have to do something in the drug-alcohol-testing area. I don't believe it is sufficient just to give it the eyeball approach.

I do believe maybe you, Graham, should address what employee-assistance programs you do have in place and what programs you will be looking to undertake. I think it is absolutely imperative.

November has come and gone. No one is interested anymore in terms of the problem that this nation has. The polls don't rate it highly.

But let me tell you, it is the most critical problem and has not been eliminated or alleviated to any extent.

SPEED CONTROL SYSTEM COSTS

The second thing I would like you to comment on, Graham, relates to the speed control system. You made a cost estimate of $25,000 per device if you were to have the automatic speed control system in place. What a tragedy that it was not there.

How long would it take in your opinion to put that in place and what would the approximate total cost be of SEPTA, passenger trains, et cetera?

Mr. Claytor. Senator, I will answer the last question first.

The main problem is acquiring the equipment. It's fairly simple to install. I think we, for example, do not have that equipment on our work trains, you know, the engines that carry the track material. We think we should. We have already authorized it.

I approved about $1 million of investment to put this device on 35 engines, and we think that can be completed. The problem is getting the equipment rather than anything else, within a year.

I believe that the manufacturers are not very busy these days, the signal manufacturers. They would be very anxious to get a very large order for this and I think it would come fairly fast.

So I think it would take at least a year, it might take a little longer. I can't tell you the total cost because I haven't got it in front of me, the number of units. But they are quite large with the commuter agencies.

For the freight people, they would have to change their system and have only those engines regularly assigned to the corridor instead of pooling them for the whole system and that presents them with some problems from the standpoint of economics, which could be done.

So I think one has to get the total number and then multiply it out by $25,000. That is about what it would cost.

Senator D'AMATO. Mr. Chairman, I understand that the cost of SEPTA, the entire system, would be about $30 million. That doesn't seem to be an inordinate cost to bring about the kinds of necessary protection.

Mr. Hasselman, you have heard Mr. Claytor indicate the kinds of steps that have to be taken so as to eliminate the passing or tracking at the same time of both the freight and passenger service.

Will you comment on that?

FREIGHT SCHEDULES ON CORRIDOR

Mr. HASSELMAN. First, we want out of the corridor as badly as Mr. Claytor wants us out of the corridor. We are working in that direction, and I pointed out in my testimony we have considerable incentive to do that.

As far as operating freights only between 10 p.m. and 6 a.m. we are, for the most part, we can live with that. There may be some exceptions we will have to talk about.

Mr. CLAYTOR. Right.

Mr. HASSELMAN. As far as the Havre De Grace connection Mr. Claytor talked about, I think that can be a practical solution to an otherwise insolvable problem and enable us to get other trains out of the corridor between Perryville and Baltimore.

So I guess maybe the only item Mr. Claytor mentioned that I do have some problem with is the question of speed control, because I don't know whether it's available in a form that would not create an alternative host of problems. That is the thing for us to calculate.

Mr. CLAYTOR. Yes, I agree. We can jointly work on that.

We have given a lot of thought to this with some of the experts who have been playing with this. I am quite confident we could work something out.

Senator LAUTENBERG. Could we ask you to get together and at least submit an outline of what you agree on?

Mr. HASSELMAN. Yes.

Senator LAUTENBERG. I wanted to ask you both something else in terms of where we go from here. We are, each of you is proud of the improving safety record that you have compiled, and we share the pride, with the exception of the fact that something horrible happened in January, and happened before.

So we have to get on with not only attacking the operating problems, but with making the system as efficient as we can.

My colleagues, both very distinguished members of the Senate and this panel, were decrying the fact that there were no capital funds available for the continued need.

Mr. CLAYTOR. Yes.

Senator LAUTENBERG. However, I have got to say this, and I support mass transit as vigorously as anybody does. My little dynamic state needs that kind of help.

We are the most densely populated state in the union. So I am there waving the flag of requests for assistance and help. We need it.

I think Senator D'Amato adequately put it. Whether you want to call it our crop subsidy or our irrigation system or our power system, it is to the Northeast what some of the others perhaps are to other parts of the country.

Conrail is different than Amtrak. Conrail has a bona fide business opportunity, it can compete effectively with other systems and get paid for it, other freight moving systems, get paid for it.

There has been an enviable record of profitability established under Mr. Crane and his colleagues in management.

I think the question raised here is whether or not Conrail, since there is an accusation being floated around whether on the table or not that Conrail equipment isn't up to the grade of technology for safety purposes that we would like to see it.

We are not now arguing about funding, there are several hundred million dollars' worth of profit. I am happy to see it. I am an ex-corporate type, I am still a corporate type, I am "ex-".

So I would ask as we examine the budget, including the operating budget of Conrail which we indirectly or directly have access to, whether or not there is enough being devoted to safety and in terms of whether or not the ratio of cost levied by Amtrak's trackage availability in some way ought not to be reinvested in the system. It's a complicated question.

But I think we do have to look at it. We can't just fall back on the fact that there haven't been sufficient funds to take care of that. We need those investments.

SAFETY ANNOUNCEMENTS

Mr. Claytor, I want to ask you something about process. People get on an airplane, whether it's 1 passenger or 300. They are subjected to a 2- or 3-minute runthrough of safety devices and the traditional things, seatbelts, oxygen masks, exits, et cetera, what to do in the event of a landing on water.

I think it's very helpful. Those of us who travel get bored with the message because we think we have it firmly implanted.

I still take a look, and I am a frequent flier under anybody's program. I do look for the exit doors.

Yet we get on a speeding train, 110, 120 miles an hour. There is never a reference to what safety precautions one ought to take in the event of an emergency. It would seem to me it is so basic that it is a surprise it doesn't happen.

Why isn't there a tape that goes off? We hear tapes that say North Philadelphia or 30th Street or whatever it is. Get off the train, if this is where you want to be.

Why when the train starts isn't there something, should we have other requirements? Should we look beyond the traditional?

Should we be looking at seatbelts? I know mobility is the thing you talk about, passenger freedom, but when they are seated why shouldn't we insist or encourage at least the passenger to participate in the process of safety procedures and maybe a life or two or limb or two or health of a person or two might be saved in the event of an accident.

Mr. CLAYTOR. About the only thing I think one could say in an announcement would be to look for the location of the escape windows, which are clearly marked.

Senator LAUTENBERG. Fire extinguishers?

Mr. CLAYTOR. Our attendants can find them. Fire extinguishers are behind glass cases in the end of the car. I don't like to invite passengers to tamper with the fire extinguishers.

Senator LAUTENBERG. Except when there is a fire.

Mr. CLAYTOR. Another problem is, see, our trains stop at regular stations. To try to repeat this announcement after every station would be very difficult. We have a train of 500 people. And I don't think it would do much good.

Senator LAUTENBERG. Metroliner?

Mr. CLAYTOR. The Metroliners are short, but a great many of our Northeast corridors are very heavy—this train had 500 people on it.

Senator LAUTENBERG. You are too expert for me to debate on this, but I do throw out the suggestion or recommendation that this be examined.

Mr. CLAYTOR. We will examine it.

Senator LAUTENBERG. I am not satisfied that we are dealing fully with the potential problems that we might have.

Mr. CLAYTOR. We will certainly examine it, sir.

We have of course looked at the seatbelt problem which I think is just plain not feasible. The great advantage of train travel is the ability to move around.

Senator LAUTENBERG. Even in an airplane if you have to go you have to go, and you are allowed to do it at a particular time.

Mr. CLAYTOR. But you are not encouraged to wander up and down the aisles, visit the snack bar, look out the window and other parts of the train, visit friends in another car.

Senator LAUTENBERG. I think you have a bias against airlines, Mr. Claytor. [Laughter.]

Mr. CLAYTOR. Yes.

Senator LAUTENBERG. If you take a long trip——

Mr. CLAYTOR. We certainly will look at it, Mr. Chairman. We certainly will.

OPERATING PRACTICES

Senator LAUTENBERG. The other thing that seems to thread its way through these conversations is that speed, that movement becomes a primary objective. At times to the exclusion, I think, of other sound practice.

We heard from the engineers, we heard some fairly scathing criticism of conditions, Mr. Hasselman. I assume the same applies to Mr. Claytor's position.

Maybe it's not as easy as we think to license someone and say remember what you have to do out there. You have responsibility for lots of lives and by golly, we are going to punish you if you don't.

But how about the process of establishing the proper working conditions so that people can perform efficiently with less stress and as cautious as they ought to be?

Mr. CLAYTOR. It's a top priority with us and I think we do. I would like to deal with some of the today's cases raised that just plain did not happen that way.

But we do. I think our engineers are among the best in the country. I know most of them, I ride with them frequently.

Senator LAUTENBERG. Are they better than Conrail's engineers?

Mr. CLAYTOR. I don't know, I wouldn't make that statement. But they are first-rate people, fine human beings, very responsible I believe, finely trained and efficient.

Senator LAUTENBERG. Mr. Hasselman?

Mr. HASSELMAN. We trained most of those engineers originally, Senator.

Mr. CLAYTOR. That's right, I agree.

Mr. HASSELMAN. We have a good locomotive training program, we have a good system for monitoring employees constantly in all the things that have to do with the safety of operation.

I take violent exception to the statement I heard earlier that we compromise safety for getting the trains over the road. I think that is false.

Mr. CLAYTOR. I agree with that.

Senator LAUTENBERG. You agree with Mr. Hasselman's statement?

Mr. CLAYTOR. Yes, sir; and I say it applies to Amtrak, too.

Senator LAUTENBERG. You are obviously square against the assertions made by the other gentlemen who occupied the table just before you?

Mr. CLAYTOR. Yes.

Mr. HASSELMAN. Yes.

Senator LAUTENBERG. Who say conditions are intolerable.

I find it hard, I don't want to take sides in this, that is not my responsibility at this point. I will, obviously, when we have all the facts before us.

REPORTING FOR DUTY

But I will tell you that for crews to get on a train responsible for people, responsible not just for people being carried but people who live nearby, walk across the tracks, drive across the tracks and so forth, I find it incomprehensible honestly that they don't report to somebody.

That when you get on you say, you pick up the phone and say OK, Mr. Dispatcher, I am here going to work. The guy is liable to drag himself up in the cab half drunk and say OK, clear up his speech for 2 minutes and say, "I am ready to go."

I know the conditions in a railroad are not as those in the factory.

Mr. HASSELMAN. It varies, as to whether there is somebody around when a crew reports for duty. The trainmaster was there when this man came to work, he looked at them and was unable to detect anything wrong with their condition which gives me more of a problem than anything else in this whole case, I think.

At outlying points where the crew is the only one around when they go to work, there is obviously no one they can report to face to face.

Our plan there is to have supervision drop in on them from time to time in the course of the day and see how they are performing.

Mr. CLAYTOR. Yes, and——

Senator LAUTENBERG. It's interesting to me that we will stop cars on the road for random alcohol testing, ask the person to blow into a balloon or something, why that would be a violation of individual rights if someone operates a train or something.

I mean, it would seem to me it is no less, no more restrictive than—I guess we do occasionally hear the drunk complain about his constitutional rights being violated when he gets caught.

But it would seem there ought to be a system for adequate testing and certification that the person is capable of operating this enormous responsibility that they have.

SUBSTANCE TESTING

Mr. CLAYTOR. Mr. Chairman, I fully support random testing.

Senator LAUTENBERG. I don't know whether it ought to be randomized, whether it ought to be routinized. Maybe we ought to say to people we know there is a serious problem.

Mr. CLAYTOR. Mr. Chairman, there ought to be both. The existing probable cause testing should be continued. But with computers you can have random testing that is truly random. One of the things they worry about is that it will be used as harassment of employees you don't like.

Senator LAUTENBERG. Sure, properly so.

Mr. CLAYTOR. You can require it to be picked by a computer from the entire group and computers can do random testing. Genuinely guaranteed to be random. I think that is very important.

Could I answer the question I never got to, that Senator D'Amato asked me about the employee assistance program?

We tried, we negotiated with both the UTU and Brotherhood of Locomotive Engineers about Operation Red Block. We wanted to put it in. They were not willing to agree.

So we went ahead and put in an employee assistance program in effect which has practically all of the characteristics of Operation Red Block except the union hasn't endorsed it. I wish they would. We are prepared to go further on that basis now.

It provides when a man is guilty, found guilty of violating rule G, alcohol, he has the option of electing to go for treatment. If he comes back, he gets his job back. If he does it the second time he's gone.

But the first time he has a complete rehabilitation process. And we are for improving that in any way we can. One of the first in the country and I think it's one of the best.

Mr. HASSELMAN. We too have a program that incorporates all the essential elements of Operation Red Block, Senator. I would be happy to send you something on that.

Senator D'AMATO. Mr. Chairman, on that note I would suggest that there is no sense getting into a confrontation. I see the labor people shaking their head no.

I also would suggest, and I will ask the chairman's permission, that an inquiry be made of all parties concerning what they are doing to formalize.

Let's learn by our experience and try to gain something positive from this terrible tragedy. There is no sense saying who did what in the past.

But you are hearing an offer now which I would like to see put forth in writing by both Conrail and Amtrak to the union.

Here we have an opportunity to forge this into one positive result.

One other thing, Mr. Chairman. I am very much heartened again by the attitude of Conrail and Amtrak to see what they can do to work together, number one, to attempt to recommend to us so that we can in a knowledgeable way go forth to seek whether by way of legislation or by way of the capital budget in which you, Mr. Chairman, are going to play such an important role, in terms of the appropriations to see that sufficient dollars may be made available from us to deal with SEPTA and some of the others who use these systems, the automatic speed control system, and also to hope that they work out some of the remaining details to continue to minimize if not totally reduce the utilization of Conrail freight on the highly trafficked portions of the commuter line.

So, Mr. Chairman, we owe to you an important debt of gratitude for holding these hearings not only to assemble the facts as to what caused this particular tragedy, but also to learn from it and to go forward and strengthen this commuter system and this Conrail freight system.

So we are indeed thankful to you for your leadership in this area.

Senator LAUTENBERG. Thank you, Senator D'Amato.

I wanted to ask the two of you one very quick and very simple question.

FEDERAL LICENSING

How do you feel about federal licensing of engineering personnel in the railroads?

Mr. CLAYTOR. I don't know, I would like to study it more. I am not sure——

Senator LAUTENBERG. You are a man not without opinions, Mr. Claytor.

Mr. CLAYTOR. No; but I am not sure it would do any good. I worry, as Mr. Riley did, about the creation of an enormous expensive bureaucracy to do a lot of licensing and then have no good come of it.

I would like to have, I think I would like to have the authority to use driving records and nonrailroad records in disqualifying locomotive engineers. That the union does not want to do.

See, we cannot, we don't have the authority under our contract to disqualify a fellow because he was convicted of drunk driving. That is on the highway.

If he does it on the railroad, we get him. But otherwise, not.

But on the whole, putting a big, federal bureaucracy into——

Senator LAUTENBERG. That is not the question. I didn't ask you if you wanted a big federal bureaucracy.

Mr. CLAYTOR. I don't think it could be done without it.

Senator LAUTENBERG. Well, you come from management and I come from management.

Mr. CLAYTOR. Yes, sir.

Senator LAUTENBERG. We often know there are ways to do things beyond the least productive.

Mr. CLAYTOR. Right.

Senator LAUTENBERG. Perhaps maybe we could make it part of an FAA program or something like that.

Mr. Hasselman, how do you feel about it?

Mr. HASSELMAN. I also am a little at sea at the subject. I don't know whether it will do any good or not.

It would have the undesirable aspect of taking the responsibility away from management it occurs to me. If management can look at the feds and say you qualified these employees and you are responsible if these engineers aren't fully qualified and I am not, then you will be creating a bad situation it seems to me.

Senator LAUTENBERG. Every trucking company, there is no better example today of pure private industry, they start off, a guy comes in and lays his license on the table. They say OK, at least we know you have passed an eye test or something to get going.

I really find it very difficult to take you two experienced executives in one of the largest industries in the country and hear you say well, you don't know whether it would do any good.

I respect it. If you don't know, you don't know. I would have thought each of you has more specific opinion, if you ask me a question about something in the computer business I am going to give you a firm answer, I can tell you.

Mr. HASSELMAN. I don't think we have a good idea of what is proposed.

Mr. CLAYTOR. That is one of the problems, that's right. I have a suggestion as an intermediate point, which would be to prescribe federal standards and qualifications for locomotive engineers, physical and otherwise, including records, criminal records or driving records or other records. Let's get that spelled out.

And then say the management is responsible for making sure those qualifications are met. That would be a big step forward.

Senator LAUTENBERG. Thank you, very much, each of you. If I sound like I was picking on you, I was. But thank you, very much.

Mr. CLAYTOR. Yes, sir.

NATIONAL TRANSPORTATION SAFETY BOARD

STATEMENT OF JIM BURNETT, CHAIRMAN

ACCOMPANIED BY:
BERNARD S. LOEB, DEPUTY DIRECTOR, BUREAU OF ACCIDENT INVESTIGATION
WILLIAM G. ZIELINSKI, CHIEF, RAILROAD ACCIDENT DIVISION

PREPARED STATEMENT

Senator LAUTENBERG. Mr. Burnett.

Mr. BURNETT. Good afternoon.

Senator LAUTENBERG. Welcome. I am sorry you had to wait so long to join us. We know your testimony will give us a good perspective from the NTSB's point of view.

Mr. BURNETT. Thank you, Mr. Chairman.

Those of us on the Safety Board deeply regret the circumstances under which we are here. It's gratifying however to note the interest and concern with which this committee views transportation safety.

I look forward to working closely with you to further our mutual safety goals.

I would like to introduce the staff members here with me today. To my right is Dr. Bernard S. Loeb, deputy director of the Bureau of Accident Investigation.

On my left is Mr. William G. Zielinski, chief of the Railroad Accident Division.

My testimony will focus on four railroad safety issues, automatic train control, radio communications, alcohol and drug use and passenger car interior and safety.

If you don't object I will submit my formal testimony for the record and respond to questions at this time.

Senator LAUTENBERG. We would gratefully appreciate that.

[The statement follows:]

STATEMENT OF JIM BURNETT

Mr. Chairman, I deeply regret the circumstances under which we are here, but it is gratifying to the Safety Board to note the interest and concern with which this Committee views transportation safety. I look forward to working closely with you to further our mutual safety goals.

My testimony today will focus on four railroad safety issues: automatic train control; radio communications; alcohol and drug use; and passenger car interior safety. Before beginning a discussion of these issues, I will summarize the Chase, Maryland train accident scenario.

About 1:30 p.m. on January 4, 1987, National Railroad Passenger Corporation (Amtrak) train No. 94 (The Colonial) operating from Washington, D.C. to Springfield and Boston, Massachusetts on Amtrak's northeast corridor collided with three Consolidated Rail Corporation (Conrail) diesel/electric locomotive units near Chase, Maryland. Amtrak train No. 94 consisted of two electric locomotive units and 12 passenger cars containing over 500 passengers. Sixteen people were killed and more than 170 were injured.

The accident is under intensive investigation by the National Transportation Safety Board. Preliminary evidence suggests that the three-unit Conrail locomotive was operated past a stop signal, through a trailing point switch, and onto the main track immediately ahead of the Amtrak passenger train. The faster moving passenger train overtook and crashed into the rear unit of the Conrail locomotives. Preliminary readouts of event recorders on the Conrail locomotives and speed recorders on the Amtrak locomotives indicate that both trains were being operated at speeds in excess of that permitted. Amtrak's Colonial appears to have been operated at a speed of about 128 miles per hour, and the Conrail locomotives appear to have been operated at speed of about 63 miles per hour.

The Conrail locomotives were not equipped with a device that could have controlled them automatically as required by the appropriate signals if the engineer failed to respond properly. Thus, they were able to enter the high speed (over 100 mph) passenger train main track of the northeast corridor even though the home signal indicated that the train should stop. This main track had been cleared previously for occupancy by Amtrak train No. 94.

The Safety Board long has been concerned with the issue of the operation of non-passenger trains on the same tracks as higher speed passenger trains. As early as 1970 we recommended that the Federal Railroad Administration (FRA) study the feasibility of requiring a form of automatic train control at points where passenger trains are required to meet other trains.

In 1972, the FRA told us that they had conducted such a study and found that the best system would appear to be a hybrid, composed of both present and proposed levels of mechanical control. According to the FRA, an automatic train control system was not possible at that time because of its costs and extensive installation time.

The issue arose again in an investigation of a rear-end collision of two Texas and Pacific Railway freight trains at Meeker, Louisiana in 1975. The Safety Board determined that the engineer had failed to comply with a restrictive signal aspect. In January 1976 the Board issued a safety recommendation that the FRA promulgate regulations to require an adequate backup system for mainline freight trains that will ensure that a train is controlled as required by the signal in the event that the engineer fails to do so.

The FRA responded by stating that it believed the immediate answers to the problem were improved training and effective testing rather than installation of costly mechanical or electrical backup devices. The FRA repeated this assessment in 1977, responding that it intended to complete an analysis of training and testing procedures in the railroad industry. The agency estimated that constructive action will be about 2 years in the future.

Additional communications with the FRA took place during the early and mid 1980s without satisfactory action being taken.

As a result of an accident at Seabrook, Maryland in June 1978 in which a Conrail commuter train struck the back of an Amtrak passenger train, the Safety Board issued a safety recommendation in which it asked Amtrak, specifically, in June 1978 to require all trains that operate on the northeast corridor to be equipped with an automatic train control system.

Amtrak responded in November 1980 that, as a result of this recommendation, the northeast corridor timetable had been modified to require that a train not equipped or equipped with an inoperable speed control system must not pass a signal displaying a stop and proceed indication except when the conductor or engineman has been given verbal authority to do so by the train dispatcher or authorized operator. The timetable modification further stated that if, after stopping for three minutes, the conductor or engineman of the train is unable to communicate with the train dispatcher or operator, the train may proceed.

Amtrak wrote the Safety Board in August of 1981 that they were surveying all equipment in the northeast corridor to determine the scope of noncompliance with the recommendation. In February 1982, Amtrak again wrote to the Safety Board stating that all Amtrak-owned locomotives and self-propelled cars operated in revenue service in the northeast corridor were equipped with automatic train control devices. Amtrak reiterated that it had modified the timetable and that prohibition of the operation of vehicles not equipped with automatic train control devices would disrupt service on the northeast corridor significantly. Amtrak further stated that the modified timetable had been in effect for more than one year without disruption of service. Amtrak asked the Board to reconsider the intent of this recommendation.

In September 1982 the Safety Board wrote Amtrak that, in view of the information provided, Amtrak's actions were considered an acceptable alternative to the intent of the recommendation.

Although the accident at Chase, Maryland remains under investigation, the Safety Board believes that an automatic train control device on the Conrail locomotive probably would have prevented the accident. Further, it is apparent that Amtrak's northeast corridor timetable modification did not provide the level of safety required by high speed passenger service.

Consequently, the Safety Board recommended last week once again that Amtrak require all trains operating on the high speed passenger tracks of the northeast corridor to be equipped with devices that will control the train automatically as required by the signals if the engineer fails to do so. The Safety Board also has asked that, pending the installation of such devices, Amtrak require that the operators of all trains not equipped with such devices stop before entry, regardless of signal aspect, and secure positive clearance to enter the track before proceeding further.

Another major concern of the Safety Board is the lack of an operable train radio on the Conrail locomotive capable of providing train-to-train and train-to-fixed station communications. The Conrail engineer stated that he broadcast an emergency message that he could not stop, but the Safety Board has no evidence that the message was made or received.

The Conrail locomotive radio normally used for train-to-train or train-to-fixed station communication was inoperative. The contrail engineer had only a portable type of radio, not well suited for this purpose. Whether or not evidence gathered in the investigation supports the engineer's contention that he tried to make an emergency broadcast prior to the collision, this accident points out the potential need for an operable radio capable of train-to-train and train-to-fixed station communications.

The Safety Board, for many years, has pressed the railroad industry to widen the use of radios to improve communications in its operations. Safety recommendations have been issued to the FRA and the Association of American Railroads (AAR) stressing the need for radios to be required equipment on trains, for compatibility of radios between railroad properties, and for standards governing the use of radios in industry. Recommendations also have been issued to various individual properties on the same issues.

To underscore our continued interest in this important safety issue, the Board issued a safety recommendation to the FRA in January 1986 asking it to require that radios be installed on trains and to provide requirements for their use, for their compatibility among railroads and for their maintenance.

As a result of its investigation of the head-on collision of Burlington Northern freight trains near Westminster, Colorado in August 1985, the Board reiterated and reemphasized the importance of this safety recommendation. Investigation.of the accident revealed that operating personnel involved in the accident had complained about the performance of the radio installed on one of the trains. The FRA has indicated that it will be conducting public hearings on the general topic of radio communications in the railroad industry early in 1987. The Safety Board will continue to aggressively pursue the issue of ineffective radio communications with the FRA.

For the record, the Safety Board also has addressed the issue of operable radios with Amtrak, recommending that all trains operating on a main track be equipped with an operable radio.

The Board's investigation of a head-on collision at Edison, New Jersey in April 1974 revealed that Amtrak's passenger train had been allowed to depart New York with an inoperative radio. The Board points out that this recommendation was cast in terms of Amtrak-owned equipment, and Amtrak ultimately complied with the intent of the recommendation.

Just last week, the Safety Board reemphasized this issue by recommending to Amtrak that it require all locomotives allowed to enter and operate on the high speed passenger train trackage of the northeast corridor to be equipped with an operable radio capable of train-to-train and train-to-fixed station communications. This recommendation was made in conjunction with the Chase, Maryland accident.

Another issue vital to rail safety is the use of alcohol and drugs before or on the job. As the Committee knows, toxicological tests of blood and urine samples were provided under the FRA regulations by some members of the crews of both trains in the Chase accident. The results for those crew members who provided samples were negative except for the engineer and the brakeman of the Conrail train. Tests of the urine and the blood samples of these two employees indicated the presence of both the psychoactive and the non-psychoactive constituents of marihuana.

It is too early for the Safety Board to evaluate any effects the presence of the marihuana may have had in this accident. Safety Board human performance investigators are engaged in a very thorough investigation of the background of these employees. The information thus gathered will be used along with the toxicological test results to analyze this accident.

Control of alcohol and drug use in railroad operations is a truly critical safety issue. In my first speech as Chairman of the Safety Board in June 1982, I said that alcohol and drug use in the rail industry had "disaster potential." The Board called for the FRA to produce appropriate regulations as soon as possible.

The adoption of federal regulations prohibiting consumption of alcohol and use of drugs by railroad operating employees before and during duty hours and providing for toxicological testing after most accidents has formed a framework under which the Board's objective to reduce the incidence of alcohol and drugs in railroad accidents could be achieved.

Certainly, if it were not for such a rule, we would not now have the results of the toxicological tests of that portion of the surviving members of the train crews in the Chase accident that were tested. Indeed, without these regulations we would not have the additional evidence that tells us just how thorough a human performance investigation we need to conduct.

However, this horrendous accident has also pointed out that the regulations do not guarantee all covered crew members will be tested properly and in a timely manner following accidents addressed in the rule. In the Chase accident, three Amtrak crewmembers and the Amtrak dispatcher at Philadelphia did not provide samples and thus were not tested in accordance with the rule. Samples from one other Amtrak crewmember were obtained from a Baltimore hospital after the crewmember went to the hospital for medical aid. The samples were then obtained by the FRA and tested. Application of the rules was far from orderly, and more than half of those who should have been tested were not tested in accordance with the FRA regulations.

In commenting in 1984 on the FRA's proposed rulemaking on alcohol, the Safety Board stated that the final rule should state clearly that the post-accident testing program supplements rather than replaces the Safety Board's authority in the Independent Safety Board Act of 1974 to order an autopsy. It should point out also that the Board has authority to seek other tests of train crews or the samples drawn from them under this rule, as well as authority to obtain or take possession of any evidence which pertains to an accident.

As part of its accident investigations, the Board plans to review implementation of the federal rule by the railroads, because the critical test of its success will be the extent of its application by the rail industry and of its enforcement by the FRA. The Board is concerned that certain employees may not be tested because railroads may not have established adequate procedures to maintain oversight of all covered employees following an accident and to present them for testing within the time requirements of the regulation.

Another concern of the Board's is that the dollar value of damage in accidents estimated by railroads may be understated to keep it below the $500,000 threshold above which toxicological testing of employees is required under the federal regulation.

The Safety Board's investigation of the accident also has highlighted concerns about the safety of passenger car interiors. The Board has compiled extensive documentation illustrating that passenger injuries occur as a result of the injury producing features in the passenger car interiors. Seat and seat restraint failures, lack of padding covering metallic parts of the seats and inadequate baggage restraints are some of the specific injury producing features causing concern. The Board repeatedly has urged both industry and the FRA to take the necessary action to enhance the safety of passenger cars.

The Board's concern with the safety of passenger car interiors dates back to 1970 when, as a result of its investigation of an accident in Franconia, Virginia in January 1970, it recommended that the FRA institute immediate regulations requiring all future new and rebuilt passenger cars be equipped with secured seats and luggage retention devices.

The FRA responded initially that it would begin a study in this area and, based on an evaluation of the study, it would determine the need for regulations. The date for completion of this study was extended several times, and the Board has never received a final copy.

The investigation of an Amtrak train collision at Wilmington, Illinois in July 1983 again revealed inadequacies in the design of passenger car interiors and, as a result, the Board issued a recommendation which called for the FRA to expedite studies on the interior design of passenger cars and publish recommended guidelines for securing seats and for luggage retention devices.

The Board's investigation of an Amtrak train derailment at Kittrell, North Carolina in March 1984 demonstrated again the need for luggage retention devices, and this was reiterated to the FRA. In June 1985 the FRA responded to the Board's recommendation and indicated that it planned to take no further action. The Board expressed disappointment in this decision in view of the overwhelming documentation that injuries have occurred and continue to occur as a result of the features of the passenger car interiors, particularly unrestrained luggage from the overhead racks.

The Board cited another Amtrak accident in Astoria, Queens, New York in July 1984 which again revealed that these sources of injuries continue to pose a threat to passengers. The Board urged the FRA to reconsider its decision and to take action to implement its recommendation. No further response from the FRA has been received.

The Safety Board also has issued recommendations over the years directly to Amtrak regarding improvements in the design of passenger car interiors. These recommendations have been directed at baggage retention of overhead luggage racks, inadequately secured equipment, seat locking devices and padding covering metallic seat parts. Amtrak has made some changes as a result of these recommendations, but has failed to implement, fully, a number of the recommendations, especially those relating to improved luggage retention.

Reports of seat failures and loose microwave ovens in the cars involved in the Chase accident again suggest that further action is needed in securing seats, equipment in the food service cars and overhead luggage. The Safety Board will scrutinize closely the effect of the improvements instituted thus far by Amtrak and will assess the need for further recommendations.

Mr. Chairman, that completes my formal statement. I will be pleased to respond to questions.

Senator LAUTENBERG. There were four subjects. Might you just give us a quick review of each of the major headings?

We talked about radios. We haven't discussed it at length, but I heard the people from labor and we heard other testimony that suggests the system is essentially inoperative, as I believe it was in the case of the Conrail train, the passenger car.

I served as Commissioner of the Port Authority of New York and New Jersey before I came here, and we had the PATH train.

We were concerned about flammability. I saw the scorched car or cars that came out of this wreck and wondered about materials inside, whether they are required to be as inflammable as we can get and whatever other comments you would like to make under the major headings.

Mr. BURNETT. Under the subject of automatic train control there are various systems, and they go by various names, which would automatically restrict a train from entering a block from which the signal forbids it to enter.

This is in case there may be either a failure on the part of the traincrew to observe the signal or incapacitation on the part of the traincrew.

The Northeast corridor is equipped for such systems and, in fact, Amtrak locomotives all have it, although many of the Conrail locomotives operating on that system and also some commuter trains operating on the system are not so equipped.

The Safety Board is on record going back to 1970 in calling for the Federal Railroad Administration to implement regulatory action to get automatic control systems back into our nationwide railroad system. We once had them back in the days of heavy passenger train activity. They were required by law or similar——

Senator LAUTENBERG. You say way back. Was the technology then available that would suffice?

Mr. BURNETT. I am sure today's technology is much improved, but going back over the twenties we had systems that were mandated. Not what we have now.

Senator LAUTENBERG. Did they fall as the financial fate of the railroads fell?

Mr. BURNETT. Financial failure and discontinuance of passenger trains. They were primarily initiated as a way of protecting passenger trains. As we had fewer of them, the demand for that type of regulation seems to have——

Senator LAUTENBERG. Do you have any idea what it would cost? We asked previous witnesses this question.

Mr. BURNETT. Well, I think——

Senator LAUTENBERG. On the Northeast corridor, let's say, Mr. BURNETT. On the Northeast corridor we do not. We have received the first figures we have ever received from the Federal Railroad Administration. I received a letter about 9:30 this morning from John Riley, the——

Senator LAUTENBERG. Was this in response to your request?

Mr. BURNETT. We sent a letter last week in which we classified a previous recommendation as unacceptable action. This was in response to that letter which——

Senator LAUTENBERG. Over the years the NTSB had never requested that kind of information or sent up an alert signal?

Mr. BURNETT. We had never received it from them, nor to our knowledge did they have it.

Senator LAUTENBERG. Was it requested?

Mr. BURNETT. I don't think we had ever requested actual figures on what they estimated the costs to be in the system, not to my knowledge at least.

Senator LAUTENBERG. How about the radio system?

Mr. BURNETT. I have just completed holding a hearing on another Amtrak accident that took place in October in Wisconsin in which we also had radio communications as a major issue.

I was tempted sometimes during that hearing to think maybe the railroads ought not to be allowed to have radios. I don't say that as a serious proposal, but I think we are in a situation where the railroad industry is like a barbed wire fence, one foot on one side, another foot on the other. And it's a dangerous position to be in.

If they are going to use them, they ought to use them properly.

PROMULGATE RULES

We have suggested that the FRA promulgate regulations that would force the rail industry to adopt a modern, efficient and safe approach to the use of railroads.

The FRA has replied to us they are beginning a review process. In fact, they will hold hearings on January 27, and the Safety Board will participate in that.

Among the problems we see first are that many times trains are dispatched without operative radios even when they are required. We have seen that in several Amtrak accidents and many other freight trains——

Senator LAUTENBERG. Are radios required?

Mr. BURNETT. Basically, no. Amtrak has adopted a policy of having radios.

To give you an example, back in 1984 there was an Amtrak accident in Essex Junction, Vt. In that case there was a track washout. Nobody discovered that; therefore, they had no opportunity to communicate it to the train ahead at the time it hit it.

However, if they had discovered it and wanted to stop the train there would have been no radio available on that train that would have been able to receive transmissions from the Central Vermont Railroad, which maintained the track.

We sent recommendations to Amtrak to improve the maintenance and reliability of their radios and to make sure no locomotive was dispatched without operative radios at that time.

But the industry has been slow to adopt in a modern fashion the use of radios. I think it is important to understand that, to the extent they are going to be relied on, we have to not only have radios, but we have to have some redundancy in them, we have to have an adequate maintenance program just like we would have on an airliner, and we have to have an adequate testing program.

RADIOS

Senator LAUTENBERG. Would radios be a significant safety assist?

Mr. BURNETT. Under a system in which they are properly used, yes. They could produce a hazard, and I think the industry has recognized this, unless it's systemized and there are adequate protections and some redundancy and safeguards.

This is one of the reasons the industry has given us for being reluctant to adopt radios as a systematic proposition.

Senator LAUTENBERG. The FRA says these devices are easy to disable or to circumvent so the costs aren't worth it. You don't agree with that, do you?

Mr. BURNETT. I am not sure I have heard them say radios were easy to disable or circumvent. I am not sure anybody wants to.

They have talked in terms of the alerter devices being easy to dismantle and circumvent. There are problems with that.

We don't believe that is an adequate reason not to use them, at least in operations in areas where you have passenger traffic or heavy hazardous materials transportation.

Senator LAUTENBERG. Senator D'Amato.

Senator D'AMATO. Mr. Chairman, I am not going to be able to stay for the remainder of the hearing. We have a vote on in conference right now.

I would like to submit some questions to the safety board in particular. I think it is important also, I am going to ask that you respond to Mr. Claytor's recommendation as it relates to the automatic speed control system.

It would seem to me that that system is absolutely imperative, given the tragic experience we have had in this accident in particular.

I would like you to address it not only at this point in time, but also in writing.

RAIL SAFETY REVIEW

If you have not undertaken the kind of review of the system that you might feel necessary, I would hope that you would. I would hope you would inform this committee in writing as to your recommendation. I think it is absolutely imperative.

Second, I think we have failed terribly in this particular area, as well as not having come forward with a program dealing with drug and alcohol counseling, abuse, and weeding out those who do not want to avail themselves of the program. They don't want to recognize they have a problem. I am not going to blame the administration as such, but everyone.

We must recognize the existence of the problem and act quickly to protect the nation's skyways, our roads, and certainly the rail system. I think the National Transportation Safety Board has to address that. It's not enough to just dance around this constitutional thorn. I recognize it. We have to fish or cut bait at some point in time. We are not going to make everybody happy.

We had better recognize that this is a national dilemma. And your board certainly is on the cutting edge. I would look forward certainly to some recommendations.

If necessary, Mr. Chairman, maybe you would hold some oversight hearings again in connection with what those proposals and recommendations are in this important area, because you have been a leader in fighting for flight safety as well. So it's not just engineers. It's a national problem. Thank you.

Senator LAUTENBERG. Thank you, very much, for your contribution, Senator D'Amato. Anything that you want in the record of course, the record will be open for a couple weeks.

SUMMARY OF ACCIDENT

Mr. Burnett, I would like to ask you if you have any kind of a summary view or statement that you would like to make about the January 4 accident?

Mr. BURNETT. I could state for you some excerpts out of our prepared testimony if you would like.

About 1:30 p.m. on January 4, 1987, Amtrak train 94 collided with three Conrail locomotive units on the Northeast corridor outside of Baltimore.

Sixteen people were killed and more than 170 injured and the Amtrak train carried over 500 passengers. The accident is still under intensive investigation by our Board. Preliminary investigation shows the Conrail engine was operated through a signal into the Amtrak train.

We have now interviewed witnesses that suggest the Conrail locomotive may have been stopped for some period perhaps up to 45 seconds after it entered the main line.

The faster moving passenger train overtook and crashed into the rear unit of the Conrail locomotives.

Preliminary readouts indicate both trains were operated at speeds in excess of that permitted. The Conrail locomotives were not equipped with a device that could have controlled them automatically if the engineer failed to respond properly to the appropriate signals.

Thus they were able to enter the high-speed passenger train main track of the Northeast corridor, even though the signal should have indicated the train should stop. And we have found no evidence of any problem with the signal system except the testimony of the Conrail engineer.

This main track had been cleared previously for occupancy for Amtrak train 94.

Mr. Chairman, among the issues that remain to be examined in connection with that investigation is where the Amtrak train was at the time the Conrail train entered the main track, whether or not it was already inside the signal system and, therefore, could have not seen the signals as they changed because of the presence of the Conrail locomotives on the main line and what effect the automatic train control system would have had and did have on the stopping ability of the Amtrak train.

Senator LAUTENBERG. Do we know whether the Amtrak train was braking?

Mr. BURNETT. No.

Senator LAUTENBERG. At the point of impact?

Mr. BURNETT. No; we have a speed recorder but we do not have an event recorder like we had on the Conrail, so we know much less about the braking and throttle settings on the Amtrak train.

Senator LAUTENBERG. Is that because the equipment wasn't there to record it?

Mr. BURNETT. They had only a speed recorder, not an event recorder.

Senator LAUTENBERG. Conrail does have that?

Mr. BURNETT. This Conrail locomotive has it. Most Amtrak locomotives have it. This was older equipment apparently and did not.

Senator LAUTENBERG. Should something like that be——

Mr. BURNETT. The Safety Board has long been an advocate of event recorders on all locomotives. It helps our job tremendously.

Senator LAUTENBERG. It was asserted to me that that accident could not have taken place had the Conrail train advanced another few hundred yards north, but if we don't know if the Amtrak train was braking, obviously it could have happened further north, that river span, or the estuary span just a little further north of there, could have produced worse tragedy. But we have no knowledge.

Mr. BURNETT. Right now, no. Hopefully, through witness statements and calculations of stopping distances and speeds, we will be able to shed more light on that process, or that issue.

Senator LAUTENBERG. Is there anything else in your review to date that you can tell us in summary form now that will help us as we contemplate what we have to do in the near term to ensure that as much is devoted to safety as we can?

ALCOHOL AND DRUG RULES

Mr. BURNETT. I might mention one issue. The Safety Board has long been an advocate of the alcohol and drug rule that the Federal Railroad Administration promulgated.

One of the requirements of that rule is for post-accident testing of train crews. In this accident scenario, post-accident testing did not happen as we would have liked.

In the case of the head brakeman and the Conrail engineer, it took about 8 hours to get a test, which is too long to have a good chance of detecting alcohol unless the person is highly inebriated.

The Amtrak onboard personnel, their service personnel and conductors, with I think one exception, were not immediately tested, not tested until a few days later, which gives only the possibility of detecting drug involvement.

The Safety Board is very concerned about that because the response and effectiveness of the onboard personnel can be a great factor in saving lives and mitigating consequences of the accident if the response is appropriate.

In fact, Amtrak has developed a training program for the onboard personnel that has improved that area a lot, but of course the issue of the capability of onboard personnel to respond to their duties is of great concern to the Board and is of concern in this accident.

TEST RELIABILITY

Senator LAUTENBERG. Questions are raised about test reliability, and we must get to a procedure that tests people not immediately after an accident, but we have to have a way of finding out in advance.

Mr. BURNETT. I think that is a very good point. One of the provisions included in the alcohol and drug rule the FRA adopted, and in my view the backbone of the regulation, is what is called "for cause" testing. It envisioned testing of rail employees after safety rules were violated, for instance.

I have been very concerned that we are not yet seeing the impact of that provision. I think it may be due to the fact that the Federal Railroad Administration—and I am not taking issue of this because the court battles probably gave a go slow signal to the railroads suggesting that they not—has been careful not to over reach itself in the use of that provision.

And many railroads probably took that too greatly to heart and we have not had the kind of aggressive program for cause testing that I would have liked to have seen.

Senator LAUTENBERG. How about the reliability factor? Is the NTSB satisfied that these are reliable tests? Are the tests conducted at FAA's CAMI facility accurate?

Mr. BURNETT. Well, we certainly try to, when we are in charge of the testing program we try to take every precaution to see that they are reliable. I think it is good to have more than one sample, good to have both blood and urine samples which we have from the people who have had positive reports in this accident so that they can be correlated.

It's best I think to have testing done by at least two labs. We have in fact sent what remains of the samples on the crew of the Conrail locomotive to another lab to get confirmation and perhaps a higher degree of resolution in the tests that were done.

Whether that is going to be possible with the remainder we have is yet to be seen.

Senator LAUTENBERG. If there was routine drug testing would you recommend that we do more than one type of test, urine and blood and so forth?

Mr. BURNETT. Well, I think initially, if you are doing breath testing, for instance, or urine testing, in either case I believe the person being tested ought to have the right to have a blood test and have duplicate tests.

Whether they want to do it, I would think in many cases the person who is not really concerned about their tests might not even want to have to submit to more than one case of any type. In those cases probably that should not be required.

ENGINEER LICENSING

Senator LAUTENBERG. Mr. Burnett, from your experience what do you think about licensing, federal licensing of engineers?

Mr. BURNETT. Well, the Safety Board has never called for licensing of engineers to my recollection.

Senator LAUTENBERG. Does that mean it's not a good idea, or is it worthy of second thought?

Mr. BURNETT. It may, Mr. Chairman, be necessary. I think we have thought there were intermediate things that could be done.

I think one would have to carefully look at what the results of the licensing program would be. I think in many areas where we do have licensing, for instance, licensing for truckdrivers, we have never made effective use of it as a safety device.

So if we are going to create a licensing program we ought to commit ourselves first to making sure it was effective for safety purposes.

Senator LAUTENBERG. Is the——

Mr. BURNETT. That is not to say the licensing authority we have for automobile and truckdrivers does not sometimes come in handy from the safety standpoint.

Senator LAUTENBERG. How about FAA pilot licensing, is that an effective program?

Mr. BURNETT. It's not as effective as I would like to see it.

Senator LAUTENBERG. It does establish some criteria by which we measure the capacity and capability of the people who are being asked to perform these jobs.

Mr. BURNETT. I would not be prepared now, nor do I think the Board would, to advocate licensing of engineers or conductors.

If we can find the solutions to some of the problems without such a massive program, if we can get a good alcohol and drug program, it should go that route.

But it may become necessary to have such a program in order to do that so we can have the federal government's oversight over decisions of the railroads as to who they hire or don't hire or put at the throttle of a locomotive.

Senator LAUTENBERG. Is the inference then that if someone is drug free, alcohol free, that it's not necessary?

Mr. BURNETT. Another reason for having a licensing program would be to establish control over the training programs railroads have.

One of the longtime concerns of the National Transportation Safety Board has been what we view as the failure of the rail industry to come into the modern era of personnel training.

Too much of rail training, and I am not saying some railroads have not done a better job than others, but too much of their training is based on memorizing the rule book. I can memorize a rule book and would be absolutely incompetent at the throttle of a locomotive.

More realistic simulated training not only of engineers but other members of the crews and training that reinforces the practical judgment making, good decisions, is needed in the rail industry.

Senator LAUTENBERG. At least a standard.

Mr. BURNETT. If we get that, I would be in favor of it.

Senator LAUTENBERG. At least a standard for training, whether it ultimately requires a license or not.

Mr. BURNETT. Right.

DUAL USE OF TRACKAGE

Senator LAUTENBERG. I want to ask you a couple quick questions on dual use of trackage, rail and freight, freight and passenger traffic on the same line.

Mr. BURNETT. The Safety Board many years ago asked the Federal Railroad Administration to undertake a study of that, and they did not really do what we desired them to do in the course of that study.

Senator LAUTENBERG. Do you have a recommendation? Was that coupled with a recommendation?

Mr. BURNETT. No; we just asked them to take a look at it.

That was before I was on the Board. I am not sure of the details of that recommendation, what stimulated it or——

Senator LAUTENBERG. I had understood as far back as I think the early seventies that it was recommended by the NTSB.

Mr. BURNETT. I think it was in 1973 we asked for a study of the issue.

Senator LAUTENBERG. Without recommendation?

OK, if there is anything in your record that registers an opinion on that, I would appreciate having it submitted to us.

I was told there was a recommendation, but if there isn't, we are not going to try to create one.

Mr. BURNETT. Mr. Chairman, I think that the recommendations we made last week where we repeated recommendations previously made to Amtrak, that if they provided automatic train control or some like system—and you get into some semantical questions about how you describe those systems—if they did that or if in the interim they would stop all freight trains until they got radio clearance before entering the high-speed main line track. I think we would deal with our major concerns about the intermixing of freight and passenger traffic on the Northeast corridor.

ADMINISTRATION CONFLICT

Senator LAUTENBERG. All right. I wanted to ask you one last question. The FRA, I think, is potentially in a conflict position in my view, being asked to administer rules and regulations over rail line operators that often furnish the basis, the informational basis for making, for establishing rules and regulations and monitoring them, and that they are not necessarily qualified to render an objective view of procedures or results or programs.

Now, your job is safety and to understand what went wrong when an accident took place. The purpose of that is to try to ensure better safety rules in the future, better safety procedures in the future.

What would you think of the possibilities of a commission similar to one that was established some time ago by the majority leader, Senator Byrd, which was included in the 1987 continuing resolution establishing an air aviation safety commission, getting members who don't have let's say as direct an interest as management of a railroad or perhaps the unions, but maybe including representatives of both groups and citizens who use, citizen agencies or organizations that use rail passenger service, shippers?

Does that strike you as something that is either necessary or worthwhile doing?

Mr. BURNETT. I suppose, Mr. Chairman, we are all aware of the pros and cons of the commission approach to public policy problems.

I am sure there are people who can enlighten you better on those than I could.

I think one of the concerns, one of the limitations we have had in dealing with rail safety issues is that there has been a lack of public scrutiny of rail safety issues as compared, for instance, to aviation safety, which we sometimes feel gets more scrutiny than it at times deserves, and the scrutiny may really detract from other issues at times.

So we have a different problem there, and perhaps a vehicle for focusing some scrutiny on rail safety and its oversight by the federal government would be helpful.

There are, of course, limitations on that kind of approach, and sometimes the use of study groups, commissions and that sort of thing becomes a convenient excuse for not moving.

We have seen this in all of the transportation safety areas the Board works with, we have seen that sort of thing happen where everyone says, let's wait for the report of such and such commission, and, therefore, you delay very important actions until sometimes the issue is dead.

Those would be my pro and con arguments for that sort of an approach.

Senator LAUTENBERG. I am concerned because the interest of the FRA is to promote railroading and the industry, and appropriately so.

I find it very difficult to see them in the role of being the auditor on the side of seeing whether the railroads are performing as they should.

A last question.

Mr. BURNETT. We don't envy their jobs. It's one thing to have the very grim responsibility of coming into an accident situation and assessing what went wrong.

It's quite another thing to try to make things go right. Their job in that respect is not enviable to the Safety Board.

It's a very difficult responsibility especially in dealing with an industry that is as hidebound and basically slow to change and in some ways antiquated as is our rail industry.

Senator LAUTENBERG. Have you done any assessment in terms of the resource devoted to safety out of FRA budget or the combination of money spent on rail safety throughout the country?

Mr. BURNETT. We really don't have the personnel or resources to take that kind of an approach.

We have more directly the issues of accident investigations and safety recommendations that spring directly from them.

Senator LAUTENBERG. Thank you, Mr. Burnett.

Mr. BURNETT. Thank you, sir.

NONDEPARTMENTAL WITNESSES

STATEMENT OF ROSS CAPON, EXECUTIVE DIRECTOR, NATIONAL ASSOCIATION OF RAIL PASSENGERS

ACCOMPANIED BY:

WALTER A. DeLEGALL, PRESIDENT, CRESCENT COMPUTER SYSTEMS

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INTRODUCTION OF ASSOCIATES

Senator LAUTENBERG. We will call the last panel of witnesses, Mr. Capon. I understand he has other people with him.

Mr. CAPON. Good afternoon.

Senator LAUTENBERG. We appreciate your patience. What you have to say is of great interest.

Despite the fact we are later than we intend to be, it's an important part of the record and will help us as we pursue the safety objectives all of us would like to achieve.

So I would ask you please, Mr. Capon, to make your comments and introduce the people at the table with you.

Mr. CAPON. To my left is Ms. Dorothy Kaminski of Vernon, Conn., who for the benefit of the committee spent the day yesterday on the train coming down to Washington to be here for the hearing. She was on the Colonial that was wrecked.

And to my right is Mr. Walter DeLegall of Silver Spring, Md., who was a passenger on train 94.

PREPARED STATEMENT

You have my full statement for the record. You have had a long morning, and I think that the high points of my testimony have been adequately covered by your previous witnesses.

So I and the people with me would be pleased to answer any questions. I will leave it at that, if that would suit you.

[The statement follows:]

STATEMENT OF ROSS CAPON

Mr. Chairman and Members of the Subcommittee, thank you for this opportunity to present the views of our non-profit, consumer-oriented Association.

Summary

*We strongly support the NTSB recommendation that all trains on the NEC be equipped with speed control or an equivalent system which would safely apply the brakes after failure of the engine crew to respond properly to a signal requiring a speed reduction or full stop.

*In the long term, we believe through freight trains should be removed from the Northeast Corridor (NEC), as recommended by U. S. Railway Association in 1975.

*We believe railroads should monitor the highway driving records of their employees and take action on the basis of changes in those records. This would be facilitated by Congressional authorization of access to the National Driver Register.

*Since maintenance-of-way and mechanical employees are also crucial to operating safety, the FRA Alcohol/Drug Use Rule and the monitoring of highway driving records should be extended to those employees.

In addition, we believe Congress should consider:

*Extending the speed control requirement to all mainline railroads, since the most potentially deadly accident could result from the wreck of a freight train with hazardous cargo in a heavily populated area;

*Random testing of employees for drug and alcohol;

*Federal licensing of locomotive engineers.

I. Speed Control

The National Transportation Safety Board (NTSB) has recommended that all trains on the NEC be equipped with "automatic train control devices or an equivalent positive control system." We presume NTSB has in mind a system that automatically applies the brakes when the train crew fails to in response to a signal requiring a speed reduction or stop. Amtrak, the owner and operator of the NEC, presumably has the authority to impose this requirement, but the Federal Railroad Administrator should also incorporate it into FRA's safety regulations.

It is my understanding that only 4 Conrail diesels currently are equipped with speed control--those which haul board of directors' specials--but that the old electric freight locomotives did have speed control. These latter engines were removed from service in the mid-1970s, briefly revived during the 1979 energy crisis, and then permanently retired--with wires removed from freight-only segments (including the entry into Potomac Yard, Alexandria and the Anacostia line that enables freights to bypass Washington Union Station). Since the diesels which replaced those electrics do not have speed control, the NEC today is actually less safe than it was 10 years ago--less safe in a crucial way that apparently permitted the "Colonial" tragedy to occur.

The automatic-control requirement should also extend to commuter rail rolling-stock used on the NEC. I understand that most such rolling-stock is not currently equipped in accordance with NTSB's recommendation.

II. Remove Through Freights from the NEC

Long term, we believe through freight runs (including light engines such as "Colonial" hit) should be removed from the NEC mainline. This was recommended for efficiency as early as 1975 in the USRA Final System Plan, which stated: "USRA believes that passenger and most through freight service should be separated in the NEC to help implement improved high-speed service." For rerouted freight trains, USRA said, "use of the Chessie route between Philadelphia and Washington appears to be the most effective means to implement the high-speed rail program."

The safety benefits of separation are explicitly acknowledged in Secretary Dole's report, NORTHEAST CORRIDOR: ACHIEVEMENT AND POTENTIAL (Nov. 1986): "To preserve ride quality on the NEC at a reasonable cost, and to upgrade still further the safety and reliability of intercity passenger operations, Amtrak may wish to facilitate the removal of some or all through freight service from the Corridor south of New York. The potential remains for freight-related safety problems, which could adversely affect intercity passenger and commuter trains....Amtrak cannot control the scores of owners of freight cars and locomotives operating over the Corridor. Neither...can it subject every piece of non-Amtrak equipment to a complete safety inspection...." (emphasis added).

North of Philadelphia, most through freights have already been removed, presumably because Conrail itself owns and is already heavily using the alternate routes there whereas the Philadelphia-Washington solution requires difficult negotiations with a separate company (CSX)--negotiations similar to what Amtrak encounters when it wants to institute passenger service over a freight-only route.

The main safety reason for removing through freights from the NEC is to minimize the chance that a freight will derail next to or in front of a high-speed passenger train. As newspaper reports indicate, through-freight derailments in the U. S. are quite common. On multi-track lines, such derailments often foul adjacent tracks. In the past 3 years, there have been 3 major NEC freight derailments (Metuchen, NJ, and Landover and Bowie, MD) and it is fortunate that no passenger train has been in the wrong place at the wrong time.

The NEC is unique with respect to frequency of passenger trains--29 daily round-trips Philadelphia-Washington (vs. NY-Albany's 9 and Los Angeles-San Diego's 7)--and with respect to passenger/freight speed differentials. Top passenger speed is 125 mph vs. generally 79 mph or less elsewhere. Top freight speeds--50 mph (60 in certain situations) --are slower than on many non-NEC railroads.

Additional benefits of removing through freights from the NEC include:
*more reliable freight service (less waiting for passenger trains; less incentive to run freights at night--perhaps compromising freight shipper needs--to avoid passenger-related delays),
*more reliable passenger service (NEC tracks can be blocked both by freight derailments and simply when big freights become disabled or delayed in the wrong place), and
*more comfortable, economical passenger operations, since big freight trains would no longer be pounding the passenger tracks out of shape.

III. Management Responsibility: Knowing Employees' Driving Records

Traditionally, it appears that both rail management and labor have viewed employees' off-duty highway driving records as "none of management's business." A 1984 NTSB recommendation relating to air safety, the Jan. 14 report in The Sun (Baltimore) about the Conrail engineer's driving record, and the close watch Maryland's Mass Transit Administration keeps on driving records of its bus and subway operators argues strongly for change.

BACKGROUND:
A. On May 1, 1984, the NTSB adopted Recommendation A-84-49 ("Class II, Priority Action") to the FAA. A-84-49 states: "Seek legislative authority to use the NDR to identify airmen whose driving licenses have been suspended or revoked for alcohol-related offenses." The NTSB report (NTSB/SS-84/03 at p. 18) noted that, as part of a General Accounting Office study, NTSB "checked all of the pilots in 1981 alcohol-involved general aviation accidents against the National Driver Register (NDR). Of 62 names and birthdates submitted, 8 probable matches were found, indicating that those 8 persons had had their driving permits suspended or revoked at least once in the past 7 years. In this case, 4 had had their permits suspended or revoked for alcohol-related reasons."
B. The Sun reported that the Conrail engineer, since 1972, had been "convicted 8 times for speeding, once for an improper turn,

once for improper passing and once for negligent driving. Most recently, Baltimore County police arrested him in Dundalk Dec. 5 on charges of drunken driving and running through a stop sign and a red traffic light."

C. Baltimore subway operators are subjected to closer scrutiny than mainline railroad engineers, even though the latter have at least as much responsibility over people's lives. Maryland's Mass Transit Administration (MTA) does not hire bus or subway operators who have more than 3 moving violations on their driving record. MTA gives its operating employees' drivers' license numbers to the Maryland Motor Vehicle Administration, which assigns them a "Special Attention" code and notifies MTA of changes in these driving records. Such notification triggers an automatic review by MTA of the employee's status leading to counseling or close observation by MTA's Safety & Training Department to see if retraining is appropriate. Under MTA's union contract, an employee loses his/her position if his/her driver's license is suspended due to wreckless driving or driving under the influence of drugs and alcohol. If the license is suspended for a minor offence, the employee is given a leave-of-absence up to 120 days and can return to work when his/her drivers' license is restored.

We are not suggesting that an engineer should lose his job because he runs a red light. However, a line should be drawn somewhere between running that red light and accumulating a long record of traffic violations such as the Conrail engineer reportedly has. Currently, no one is drawing that line. Abandoning the old "driving-record-is-irrelevant" attitude should provide for greater safety on all forms of transportation. If airline pilots and railroad engineers know that their driving records are under scrutiny by their employers, these employees will have an extra incentive to be careful on the highways. Conversely, if a highway infraction triggers a review of their employment status (as the Dundalk incident presumably would have if Conrail followed the MTA approach), the engineer would have had an extra incentive to exercise caution while operating his train. (Actually, with such a driving record, he could not even be hired by MTA.)

In light of this, we believe Congress should approve legislation suggested by NTSB recommendation A-84-49 and expand it to include the broad range of railroad employees discussed below (see IV). The legislation is necessary because the law establishing the National Driver Register limits access to states, and--under certain circumstances--NTSB and the Bureau of Motor Carrier Safety. Under a 1982 revision of the law, however, certain employers (including bus and trucking companies but not airlines or railroads) eventually will get access to the information.

IV. Include Maintenance-of-Way and Mechanical Employees

FRA's Alcohol/Drug Use Rule applies to employees covered by the Hours of Service Act (described in the Rule as "generally operating crews, persons engaged in handling orders and other instructions with respect to train movements, and persons engaged in construction, maintenance and repair of signal systems"). Rule coverage should be expanded to include maintenance-of-way and mechanical forces, since improper maintenance of track and equipment can be deadly. (Four passengers died in Amtrak's November 1983 derailment at Marshall, Texas. NTSB stated: "Contributing to the accident was the failure of the Missouri Pacific Railroad to train its maintenance of way department employees adequately in the requirements necessary to their positions.")

NARP is not the first to make this suggestion. FRA's Alcohol/Drug Use Rule notes, in its "Summary of Comments": "Brotherhood of Locomotive Engineers and a few other commenters argued for coverage of maintenance-of-way and car forces, as well as operating department officers." As noted in Section III, we believe drivers-license monitoring should apply to all employees to whom we have recommended the Alcohol/Drug Use Rule apply.

V. Proposals Worthy of Serious Study

Although the Association has not yet taken positions on the following three items, we believe they merit serious consideration and certainly would not oppose their prompt and vigorous implementation.

Speed Control Nationwide: While the NEC is unique because of high-speed passenger operations, the most serious possible rail accident might involve freight train(s) only. As Federal Rail Administrator John H. Riley stated in the background discussion accompanying his July 29, 1985 Alcohol/Drug Use FINAL RULE (p. 58):

> "The Livingston, LA, derailment of Sep. 28, 1982, was one of the most serious hazardous materials accidents in the United States since 1980, resulting in the release of hazardous materials and a major evacuation. An accident like Livingston could happen again, with even more grave consequences. The railroads transport large quantities of explosives, flammable gases, flammable liquids, and poisons, including products capable of producing both short and long-term damage to the environment. An example of a product which presents a large risk of open-air detonation is propane. A single tank car may contain 30,000 gallons of that product sufficient to create a large vapor cloud and inflict damage over a wide area if ignited. The railroads also carry many of the same chemicals that have caused major public concern when accidentally released from chemical factories."

This raises the obvious question: should a system that automatically applies the brakes be required generally on mainline railroads in the U.S.? Given the financial condition of the railroad industry and the heavy public subsidies the trucking industry enjoys, an affirmative answer probably would need to be accompanied by some form of public funding to enable railroads to install the newly required equipment.

Federal Licensing of Locomotive Engineers: Under a law enacted last year, U. S. DOT must "establish federal standards for commercial truck and bus driver licensing by July 15, 1988. The standards would require all commercial drivers to demonstrate written and over-the-road competence. Drivers handling hazardous materials wold be required to demonstrate special expertise." (Quotation is from an Oct. 17, 1986, release from Sen. Danforth's office.) We think Congress should consider licensing locomotive engineers as well. Indeed, FRA notes in its Drug/Alcohol Use Rule, "some labor commenters appeared to support licensing of locomotive engineers or others in safety-sensitive functions."

Random Testing for Drugs and Alcohol: "An engineer and 2 conductors involved in a train crash that injured 42 people Dec. 10 tested positive for cocaine or marijuana use, the Southeastern Pennsylvania Transportation Authority announced, adding that it will test most of its employes for drugs in the next 12 months" (The Washington Post, Jan. 18). Union leaders reportedly will seek an injunction against SEPTA's new random-testing policy. However, innocent employees have nothing to fear from these tests. Indeed, the program should give them greater assurance that their own lives are not being put at risk by co-workers under the influence of drugs.

Presumably, opponents of random testing on railroads generally would argue that the FRA Alcohol/Drug Use Rule has been in effect only since Feb. 10, 1986--less than a year--and the results achieved with this rule need to be closely studied. Hopefully, FRA will expedite reporting of these results so that safety is not compromised by the long time lags common in the development of so many statistics.

Thank you for the opportunity to testify. The Association appreciates your longstanding support for public transportation. We stand ready to assist your work on improving railroad safety in any way we can.

FAMILY REACTION

Senator LAUTENBERG. Thank you.

Mr. Horn has submitted testimony. Is he here?

Mr. HORN. Here.

Senator LAUTENBERG. Mr. Horn?

Mr. HORN. Yes.

Senator LAUTENBERG. Would you want to come to the table?

Mr. HORN. I would be delighted to be invited to participate.

Senator LAUTENBERG. Please do.

Mr. Horn, I know it has to be painful for you to be here and to have to recount the events. I must tell you that in addition to our sympathy, that we have enormous respect for your willingness to come forward and talk about things that may prevent another parent from losing a child or family relative. It's brave of you to do so. We have your testimony, it has been read.

But I would like to hear you, if you don't mind, run through it and we will ask the other people for their views, as well.

Mr. HORN. Thank you, Mr. Chairman.

My name is Roger Horn. I am a professor of mathematical sciences at Johns Hopkins University in Baltimore.

I have no professional expertise in the transportation industry and my qualifications to present some ideas to your committee today is that I am a parent of a 16-year-old girl killed in the January 4 Amtrak crash while returning from Baltimore to her freshman exams at Princeton University.

At first it seemed this terrible event was a random accident, the sort of thing that despite the best engineer controls may occasionally happen to an industry that otherwise enjoys a laudable safety record.

But as the days have passed and initial investigation findings have been released the horror of the crash has been compounded by the realization that it was entirely preventable and resulted from violations of common sense at the employee, the management, and the regulatory levels.

Those of us who have suffered most directly from the tragedy hope it may be a stimulus to Congress to do what is necessary to restore the faith in public.

Unlike previous witnesses, I have no professional staff to help me prepare my testimony. I did so this morning in haste and would request permission to submit a revision within 10 days.

Senator LAUTENBERG. You certainly have our permission to do that.

I will tell you that for someone without expertise, I think you have struck at the critical issues here.

As you have heard with other witnesses, raised questions in everybody's mind, whether we are doing the job we are supposed to do.

Mr. HORN. Yes, sir; this has been a very instructive morning.

RECOMMENDATIONS

I would like to raise six points for you to explore. The first is uniform federal licensing of all operating personnel in interstate transportation, whether it be the airline, train, truck or barge industries. They should all be required to hold a current federal license.

The primary purpose of this license is to get individuals into a national data collection system, not to certify their skills or competence.

I believe it is focusing on this primary objective that might well alleviate some of the astounding objections the professional witnesses that preceded me have had to this simple idea.

I don't think anybody wants a massive national program that is expensive and may well have very little output.

But there is now no way to keep national records on individuals who are in positions of public trust in the transportation industry and there is no way to follow up on patterns of behavior that may well indicate that more attention should be paid to the needs of a particular individual.

Each license holder should of course have to apply for renewal on a periodic basis, at which point review of his or her record could be triggered.

NATIONAL DATA BANK

The second element is creation of a national data bank, an item with which you might have some sympathy and professional knowledge.

There should be a data bank containing specific information on all federal transportation license holders and interstate transportation companies. Elements in the bank could include basic identification data, summary, cumulative information on skill and medical tests if made and cumulative record of reportable events to which I will turn next.

The data bank very importantly should be available to the public and ease of public use should be a primary criterion in its design.

It would require only one medium-size minicomputer to hold the entire data bank for all the transportation personnel in the country, it could be queried on line by the press, the government, regulatory authorities and the companies who now claim they don't know what these external events are that may cast doubt on the ability of their personnel to operate.

The third is the crucial area of reportable events. There should be an affirmative requirement on each federal transportation license holder and interstate transportation company to report promptly using standard forms every instance of certain reportable events such as arrest in a criminal charge, citation for automobile operation, suspension, safety violations and accidents on the job, specific medical events, substance abuse, and perhaps other items to be enumerated.

Disposition of any reportable event must also be reported. Requirement to make a timely report should be backed up by a personal criminal penalty for any failure to do so.

It certainly isn't against the law to be arrested for drunk driving. One has to prove that the person has been drunk. But it ought to be against the law to fail to report that event to the federal licensing board.

FITNESS OF OPERATORS

Regulatory standards should be developed that will require a fitness hearing for any license holder whose record meets certain standards and grounds for suspension or revocation of a license.

The fourth area is in testing for substance abuse. Periodic testing at the time of license renewal and perhaps random testing for substance abuse should be required of all federal transportation license holders.

We have heard today visual inspection was inadequate in this case to detect something that should and could have been detected if the drunk driving arrest and long record of arrests on traffic violations of the engineer of that Conrail train had been part of the public record.

The public has the right to know persons operating transportation systems are not substance impaired. This surely transcends objections to compulsory testing. The privilege of being an operator of a transportation system carries obligations and such persons can reasonably be held to a higher standard of performance than the general public.

The fifth area is technical improvements which has been the primary focus of today's hearing, but may well not be the most important area.

Regulatory agencies should require transportation agencies to install modern safety devices as they are developed and become feasible. Some of these devices are already in existence or relatively inexpensive and could and should be required.

We have heard of automatic speed controls, but I have heard no one mention today a long-existing safety device, which is automatic derailers installed at intersections at this point so that if a train goes through all these signals and is about to enter the main line, that the derailer will throw that train off and away from the main line and prevent a catastrophe from occurring. Nobody has mentioned that.

That is not very expensive. Those things have been in use for years. As a creative way to encourage development of new safety devices perhaps each regulatory agency could sponsor an annual competition with a cash prize.

CRIMINAL PENALTY

The sixth area has to do with managerial responsibility. Management has a responsibility, not just employees. Management responsibility to implement and enforce safety rules and procedures and to report reportable events should be backed up by personal criminal penalties.

Corporate fines imposed after long costly administrative hearings are simply not an effective deterrent.

Who the heck will care if Conrail eventually has to pay a $500 fine for allowing warning whistles to remain taped over?

Who is going to care if somebody on Amtrak gets his knuckles wrapped because that train was speeding? Nobody is going to care.

The effectiveness of personal criminal liability is now well recognized in our antitrust law. The safety of the traveling public is surely no less important than preventing price fixing.

If corporate managers face personal criminal liability in the safety area the importance of rigorous enforcement of safety rules and procedures might possibly be expected to become a high priority for them.

Please notice, Mr. Chairman, that none of these six proposals is costly and none of them is exotic. It is neither possible nor desirable to have a federal inspector in the cab of every interstate vehicle.

But in a free society it's possible to put in place self-activating mechanisms and incentives to encourage best available standards of public safety in the transportation industry.

I am grateful to have had the opportunity to present these thoughts.

Senator LAUTENBERG. Once again, Mr. Horn, we thank you for coming and thank you also for a very lucid presentation of points of view.

I can tell you this, that there are many industries, chemical industry, where employee deficiency that results in a spill results in culpability of the management, and not only can there be substantial fines, but there also can be criminal penalties involved, as well.

Mr. HORN. And why not the transportation industry?

PREPARED STATEMENT

Senator LAUTENBERG. Why not, when we are carrying perhaps the most precious cargo any of us have, our children and loved ones.

Thank you, very much, Mr. Horn. Your complete statement will be placed in the record.

[The statement follows:]

STATEMENT OF ROGER HORN

My name is Roger Horn. I am a professor of mathematical sciences at Johns Hopkins University in Baltimore. I have no professional expertise in the transportation industry; my qualification to present some ideas to the Committee today is that my 16 year old daughter was killed in the January 4 Amtrak crash while returning from our home in Baltimore to Princeton University for her freshman year fall term final exams.

At first it seemed that this terrible event was a random accident, the sort of thing that, despite the best-engineered controls, may occasionally happen in an industry that otherwise enjoys a laudable passenger safety record. But as the days have passed and initial investigation findings have been released, the horror of the crash has been compounded by a growing realization that it was entirely preventable and resulted from violations of common sense by railroad employees, managers, and regulators.

Those of us who have suffered most directly from this tragedy hope that it may be a stimulus to the Congress to enact new legislation that will restore the faith of the travelling public and make a repetition less likely. Although our thoughts today are naturally focussed on the railroad industry, the safety issues we are discussing are common to all forms of interstate transportation, and the following suggestions apply to all of them.

There are 6 specific areas that we suggest the Committee consider for new legislation:

1. **Uniform Federal Licensing.** All operating personnel in interstate transportation (airline, train, truck, bus, barge, etc.) should be required to hold a current federal license. The primary purpose of the federal license should be to get all licensed personnel into a national data collection system. It would also record in a central location routine medical examination data and the type and timing of training programs undertaken, most under industry sponsorship, and therefore will assure the public that at least minimal training standards of skill are being set and met. Each license holder should have to apply for license renewal periodically, at which time a review of his or her record would be triggered. No one should be permitted to be an operator of an interstate transportation system unless he or she has a currently valid federal license.

> The type of licensing being proposed in neither onerous on employees nor expensive to administer; it is primarily a means of registration and data collection. Unless future experience indicates that detailed and costly testing of licensees by federal authorities would be cost effective, it should not be undertaken. Primary responsibility for ensuring that operating personnel are properly trained would remain with the management of the transportation companies, but company management should be made personally responsible for discharging this important responsibility.

2. **National Data Bank.** There should be a single national computer-based data bank containing specific information on all Federal transportation license holders and interstate transportation companies. It should contain: Basic identification data, summary cumulative information on training programs completed and routine medical examinations, and a cumulative record of reportable events. The data bank should be available on-line to the public, and ease of public use should be a primary criterion in its design. Sample data elements are listed in Attachment I. The cost of operating the licensing system and national data bank could be met by license fees paid by individual license holders and fees paid by interstate transportation companies based on the number of their employees licensed.

> It is absolutely essential that the data be available for press and public scrutiny and that it be organized in a way that makes on-line computer access and searching convenient. Modern computerized data base technology makes the achievement of all these objectives easy and economical. There is no need to identify license holders by name in the public data bank; identification by permanent code number is adequate for public data analysis purposes. The federal licensing authority would have a complete cross reference file of code numbers, license numbers, and names, and each transportation company would have a similar cross reference file for its own employees.

3. **Reportable Events.** There should be an affirmative requirement on each federal transportation license holder and interstate transportation company to report promptly to the national data bank, with standard forms, every instance of certain reportable events: arrest on any criminal charge, citation for any automobile traffic violation, suspension of automobile license, safety violations on the job, accidents on the job, specific medical events, substance abuse, completion of substance abuse rehabilitation programs, citation by regulatory agencies for safety or operating violations, etc. The disposition of any reportable event must also be reported. The requirement to make a timely, accurate, and complete report should be given teeth by a criminal penalty for failure to do so. Regulatory standards should be developed that require a fitness hearing for any license holder whose record meets certain standards, together with grounds for suspension or revocation of a license.

> The clear light of publicity may be more effective and less costly than reams of regulations in encouraging adherence to safety rules and sound operating procedures. A history of chronic disregard of rules or a pattern of personal or corporate behavior indicating a need for further scrutiny would be apparent in the cumulative record of the data bank. With such data available, management can be made clearly responsible for continual scrutiny of the fitness of their employees for public trust and can require early programs of counseling and rehabilitation for troubled employees before they cause a catastrophe. See Attachment II for the traffic conviction record in only one state (Maryland) of the Conrail engineer in the January 4 crash. It lists 12 convictions and 2 license suspensions through December 11, 1986; an arrest on December 5, 1986 for drunken driving and running through a stop sign and a red traffic light (actions very similar to what he apparently did a month later on the railroad) is not shown on the record since trial is not scheduled until March 4, 1987. The public cannot understand why a person with a long history of automobile traffic violations, indicating chronic disrespect for laws and rules, should ever be entrusted with operating responsibility in public transportation, which requires rigorous adherence to laws and rules.

4. **Dealing with Substance Abuse**. Every interstate transportation company should be **required** to have in operation a pro-active program for voluntary and cooperative identification of, counseling for, and assistance to substance abusers. Identification, prevention, and rehabilitation should be the first line of defense against substance abusers in both labor and management. Self-identified first-time substance abusers who enroll in the voluntary program should be dealt with on a non-disciplinary basis. A program of required testing both for probable cause and on a fair random basis is also necessary for federal licence holders, **not as the only way** to deal with substance abuse, but as essential components of an overall program designed to ensure a workplace free of substance abuse. The primary purpose of random testing is to encourage voluntary participation in the pro-active voluntary program. The reportable events component of the national data bank can be useful in identifying patterns of behavior that may be associated with substance abuse.

> The public has a right to know that the persons operating their transportation systems are not substance-impaired. This right surely transcends important constitutional and personal objections to compulsory testing. The privilege of being an operator of a transportation system carries with it special obligations, and such persons can reasonably be held to a high standard of performance. Just as employees have a right to a safe workplace, enforced by OSHA, employers should have the right and the obligation to determine employees' fitness for service in the workplace.

5. **Safety Devices and Procedures**. Regulatory agencies should require interstate transportation companies to install modern safety devices and procedures as they are developed and become feasible. Simple existing devices such as working radios and automatic derailing systems should not be ignored in favor of flashy new high-tech devices. Merely installing safety devices is not enough, of course: these devices must be in working order and operated by alert and responsible employees. Pre-dispatch working condition of all critical safety systems should be attested in writing by both operating and maintenance personnel, subject to criminal penalties for failure to do so or falsification of records. Management should be **required** to make periodic and random checks of equipment in service. Regulatory agencies should be **empowered and required** to make periodic and random checks of employees, management supervision, and equipment at time of dispatch.

> Regulatory agencies, often under the apparent influence of the industries they regulate, have not always established a historical record for requiring use of proven safety technologies or for fostering development of new safety technology. Because safety devices and procedures usually cost money and do not usually improve productivity, transportation companies have natural incentives to resist installation of safety devices and implementation of safety procedures. This makes safety regulation a natural government interest, but the public cannot understand why our regulators are so slow to study and make rules and so hesitant to seek new legislative mandates for improved regulation as technology and knowledge improve. As a creative way to encourage development of new safety devices and procedures, regulatory agencies could sponsor an annual inventor's competition with a cash prize.

6. **Responsibilities of Management and Labor**. Management responsibility to implement and enforce safety rules and procedures and report reportable events, and employee responsibility to observe safety rules and procedures and report reportable events, should be emphasized with personal criminal liability.

> Fines imposed only on companies and only after long and costly administrative hearings are simply not an effective deterrent to managerial nonfeasance or misfeasance, or to employee misconduct. They are paid by the customer or subsidy-giver in the end, not by the manager or the employee. Who will care, take notice, or be deterred from

> future violations if Conrail has to pay a $500 fine for allowing warning whistles to remain taped over, a condition that must have been (or should have been) known to both maintenance employees and first-line supervision? Will it make the managers of Amtrak any more vigilant in preventing dangerous excessive or unauthorized speeds by their passenger trains if the Federal Railroad Administration (a government agency) eventually fines Amtrak (another government agency) for the actions of their engineer in the January 4 crash? The effectiveness of personal criminal liability is now well-recognized in antitrust law. Is the safety of the travelling public any less important than preventing price-fixing? If managers and employees face personal criminal liability in the safety area, rigorous enforcement and observance of safety rules and procedures may be expected to become a high priority for both. The public cannot understand why it is not now a **crime** to disable a railroad safety device, operate a train while using drugs, or negligently fail to supervise people who do these things.

Apparently the only federal criminal penalties for substance abuse by interstate transportation operators are in the Federal Anti-Drug Abuse Act of 1986, Subtitle T, Chapter 17a, which provides for a prison sentence of up to 5 years or a $10,000 fine or both for operating a common carrier while under the influence of alcohol or drugs. It provides that a blood alcohol level of at least .10 is presumptive evidence of "under the influence", but sets no similar quantitative standard for drugs (it refers to detection of levels sufficient to impair and thereby invites a court battle of expert opinions in any prosecution under this statute). This new law should be strengthened to provide that **any** drug levels in blood or urine above trace amounts shall be presumptive evidence of impairment. Many drugs have long-lasting effects on judgement and perception, and there should be no place in the public transportation cab or cockpit for anyone who uses illegal drugs at any time in any quantity.

Please notice, Mr. Chairman, that none of these six proposals is expensive or exotic, and all of them could be implemented in 1987.

It is neither possible nor desirable to have a federal inspector in the cab of every interstate vehicle, but in a free society it is possible to put in place self-activating mechanisms and incentives, followed by criminal penalties when necessary, that will encourage adherence to the best available standards of public safety in the transportation industry.

Thank you, Senator Lautenberg, for the opportunity to present these thoughts to the Committee. The travelling public is relying on you and your subcommittee to take the legislative initiatives needed to restore its faith in our public transportation systems.

[ATTACHMENT 1]

SAMPLE DATA ELEMENTS IN THE RECORD OF A LICENSE HOLDER

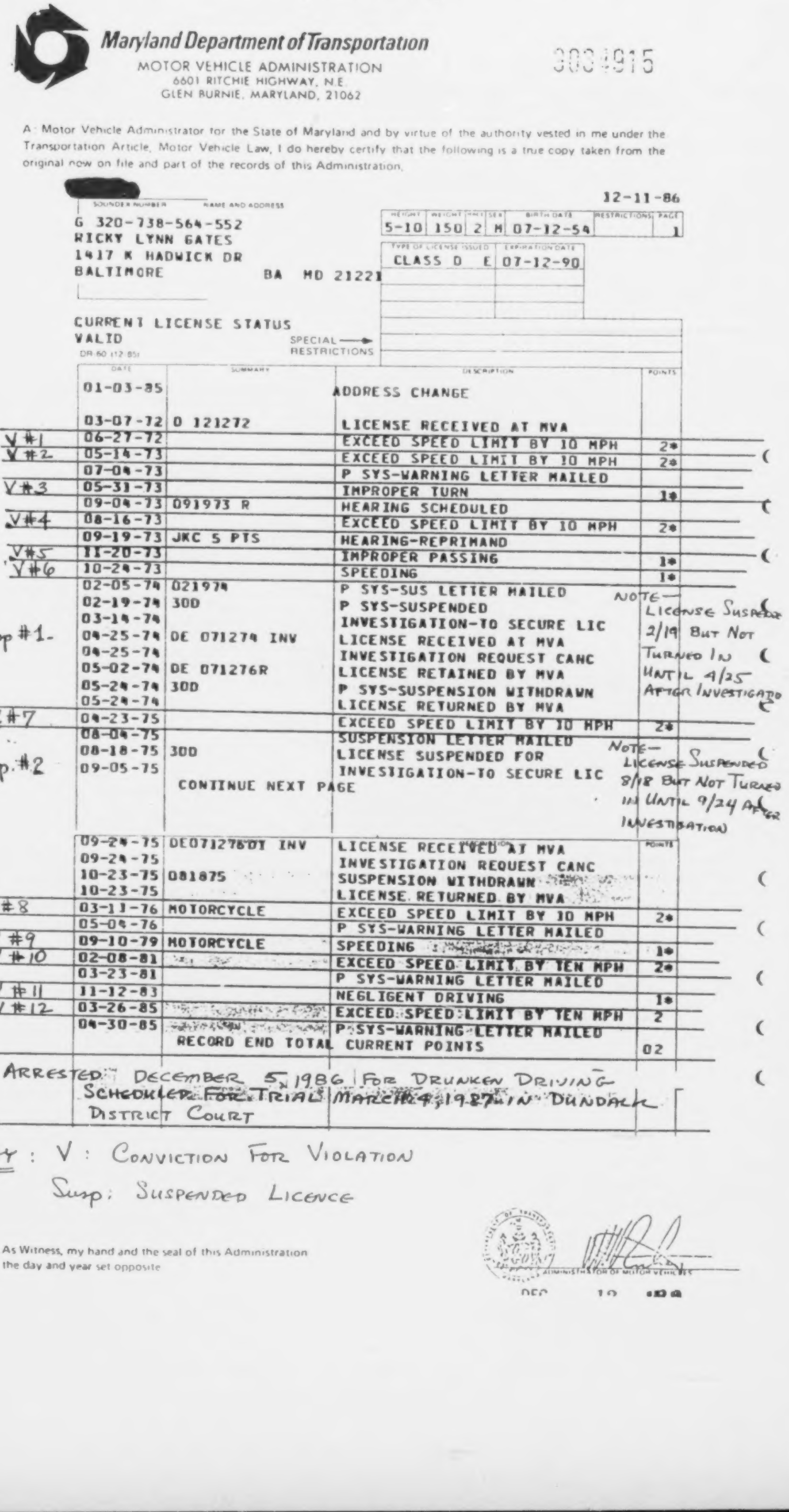
Non-Public Data Elements

Name
Social Security Number
License Number
Month and Day of birth
Address
Home telephone number
Work telephone number
Name, address, and telephone number personal physician
Name, address, and telephone number of personal dentist
Fingerprints

Public Data Elements

Permanent code number (linked to license number in separate confidential file)
Position classification code (engineer, pilot, brakeman, barge operator, etc. per separate public file)
Employer identification code (linked to company name in separate public file)
Year of birth
List of minimum qualifications for the operating position, as established by the employer or regulatory body, dates the license holder met each qualification, scores if applicable
Additional courses or tests passed beyond the minimum qualifications, with dates and scores
One record for each routine or special medical exam and hospitalization, as required by the employer or regulatory agency, containing selected data elements appropriate to the operating position, such as blood pressure, pulse rate, reaction to stress test, EKG findings, EEG findings, blood chemistry, levels of specific substances, vision test, hearing test, etc., as well as a limited amount of text for evaluation and recommendations.
One record for each reportable event, including arrest on any criminal charge, citation for any automobile traffic violation, suspension of automobile license, safety violations on the job, accidents on the job, disciplinary action on the job, substance abuse, and similar pertinent events, as well as a limited amount of text to be provided at the option of the license holder. Disposition of any reportable event (such as conviction or acquittal subsequent to an arrest, successful completion of a substance abuse treatment program, return to regular status following disciplinary action, etc.) is also a reportable event.

[ATTACHMENT 2]



Maryland Department of Transportation
MOTOR VEHICLE ADMINISTRATION
6601 RITCHIE HIGHWAY, N.E.
GLEN BURNIE, MARYLAND, 21062

3034915

A: Motor Vehicle Administrator for the State of Maryland and by virtue of the authority vested in me under the Transportation Article, Motor Vehicle Law, I do hereby certify that the following is a true copy taken from the original now on file and part of the records of this Administration.

[redacted]

12-11-86

SOUNDEX NUMBER NAME AND ADDRESS
G 320-738-564-552
RICKY LYNN GATES
1417 K HADWICK DR
BALTIMORE BA MD 21221

HEIGHT	WEIGHT	RACE	SEX	BIRTH DATE	RESTRICTIONS	PAGE
5-10	150	2	M	07-12-54		1

TYPE OF LICENSE ISSUED	EXPIRATION DATE
CLASS D E	07-12-90

CURRENT LICENSE STATUS
VALID
DR-60 (12-85)

SPECIAL RESTRICTIONS

	DATE	SUMMARY	DESCRIPTION	POINTS	
	01-03-85		ADDRESS CHANGE		
	03-07-72	D 121272	LICENSE RECEIVED AT MVA		
V #1	06-27-72		EXCEED SPEED LIMIT BY 10 MPH	2*	
V #2	05-14-73		EXCEED SPEED LIMIT BY 10 MPH	2*	
	07-04-73		P SYS-WARNING LETTER MAILED		
V #3	05-31-73		IMPROPER TURN	1*	
	09-04-73	091973 R	HEARING SCHEDULED		
V #4	08-16-73		EXCEED SPEED LIMIT BY 10 MPH	2*	
	09-19-73	JKC 5 PTS	HEARING-REPRIMAND		
V #5	11-20-73		IMPROPER PASSING	1*	
V #6	10-24-73		SPEEDING	1*	
	02-05-74	021974	P SYS-SUS LETTER MAILED		NOTE— License Suspended 2/19 But Not Turned In Until 4/25 After Investigation
	02-19-74	30D	P SYS-SUSPENDED		
	03-14-74		INVESTIGATION-TO SECURE LIC		
Susp #1-	04-25-74	DE 071274 INV	LICENSE RECEIVED AT MVA		
	04-25-74		INVESTIGATION REQUEST CANC		
	05-02-74	DE 071276R	LICENSE RETAINED BY MVA		
	05-24-74	30D	P SYS-SUSPENSION WITHDRAWN		
	05-24-74		LICENSE RETURNED BY MVA		
V #7	04-23-75		EXCEED SPEED LIMIT BY 10 MPH	2*	
	08-04-75		SUSPENSION LETTER MAILED		NOTE— License Suspended 8/18 But Not Turned in Until 9/24 After Investigation
Susp. #2	08-18-75	30D	LICENSE SUSPENDED FOR		
	09-05-75		INVESTIGATION-TO SECURE LIC		
		CONTINUE NEXT PAGE			
	09-24-75	DE071276DT INV	LICENSE RECEIVED AT MVA		
	09-24-75		INVESTIGATION REQUEST CANC		
	10-23-75	081875	SUSPENSION WITHDRAWN		
	10-23-75		LICENSE RETURNED BY MVA		
V #8	03-11-76	MOTORCYCLE	EXCEED SPEED LIMIT BY 10 MPH	2*	
	05-04-76		P SYS-WARNING LETTER MAILED		
V #9	09-10-79	MOTORCYCLE	SPEEDING	1*	
V #10	02-08-81		EXCEED SPEED LIMIT BY TEN MPH	2*	
	03-23-81		P SYS-WARNING LETTER MAILED		
V #11	11-12-83		NEGLIGENT DRIVING	1*	
V #12	03-26-85		EXCEED SPEED LIMIT BY TEN MPH	2	
	04-30-85		P SYS-WARNING LETTER MAILED		
		RECORD END TOTAL	CURRENT POINTS	02	

ARRESTED DECEMBER 5, 1986 FOR DRUNKEN DRIVING
SCHEDULED FOR TRIAL MARCH 4, 1987 IN DUNDALK
DISTRICT COURT

KEY: V: CONVICTION FOR VIOLATION
Susp: SUSPENDED LICENCE

As Witness, my hand and the seal of this Administration the day and year set opposite

ADMINISTRATOR OF MOTOR VEHICLES

DEC [illegible] [illegible]

FIRSTHAND EXPERIENCE

Senator LAUTENBERG. I would ask the other people who were on the train if you have a statement you would like to make in summary form, were you evacuated quickly enough and were the personnel doing what you thought now in retrospect they should have been doing?

Were you hit by baggage or other things? Did you know where the exits were?

Ms. KAMINSKI. No; I didn't know where the exits were. I was amazed at how little written instruction could be found or even seen visibly, especially when you are in a panic situation.

We were trying to kick out windows. One woman was trying to open a sliding door which had closed automatically after impact. She was just trying to get a grip on her fingers to slide the door open. The coach had been filling up with smoke at that time, and she was trying to exit.

Once we had gotten past that obstacle we realized we had another sliding door that had to be somehow forced open.

Luckily there were some sort of emergency instructions. There is a handle that is recessed in the ceiling near that sliding door. Once we figured that out, we could exit the coach.

I felt that the whole traumatic incident was compounded by lack of adequate instruction as to emergency exits and exit procedures. I think a lot could be done in that regard.

Senator LAUTENBERG. What car were you in?

Ms. KAMINSKI. I was in car number 7. Half was a snack bar and the other half was seating.

Senator LAUTENBERG. Was that the last car?

Ms. KAMINSKI. No; about the middle, midway.

Senator LAUTENBERG. Car number 7 was midway?

Ms. KAMINSKI. Yes.

Senator LAUTENBERG. How long were you there before you were able to get out, how long after the accident?

EXITING FROM CARS

Ms. KAMINSKI. It seemed like an eternity.

Senator LAUTENBERG. Sure.

Ms. KAMINSKI. I suppose in retrospect it was probably just minutes. To this day I don't know whether I exited through a window that eventually had been smashed by the other young man who was trying to get out the window or whether we jumped from what happened to be an open outer door from the coach. I just, my mind just is blank in that regard.

Senator LAUTENBERG. Yes.

Ms. KAMINSKI. As it was we had exited to the wrong side of the train and we had jumped into the midst of all the rubble from the immediate crash. You know, cables and metal parts of the locomotive that I have read was demolished by the impact.

So this necessitated us getting back into the coach and exiting on the other side and then trying to fool around with that door, trying to figure out how that sliding door opened. It was a matter of minutes, but as I said, it seemed an eternity.

Senator LAUTENBERG. Were there any Amtrak personnel available to give you any assistance?

Ms. KAMINSKI. No; I think that is why we had such a problem. If there had been they would have known what to do, how to open the window.

Senator LAUTENBERG. There was no one to give you instruction?

Ms. KAMINSKI. No; unfortunately. I am surprised because there was a man in the snack bar selling sodas and things. Whether he exited from the opposite end of the coach, I don't know. But he certainly wasn't down with our group. We were pretty much on our own.

Senator LAUTENBERG. Did you see him outside later?

Ms. KAMINSKI. No; I can't say that I did.

Senator LAUTENBERG. Did you witness any serious injury or fatalities in your car?

Ms. KAMINSKI. No; there were no fatalities. We were just pretty much bumped around and shaken up.

The person that looked worse than any of us, I became a little hysterical and I was crying because we had gone back into the coach for me to get my shoes. My shoes came off at the impact. I had jumped off and I knew I had to have shoes because walking on those stones and rocks, it's not very comfortable. So we knew it wasn't going to explode, it wasn't on fire at that point so a few of us went back into the coach.

A conductor at that point was walking through, and he saw me crying and he stopped for a moment to console me to find out what was wrong with me. When I looked up at his face, the man was in much worse shape than me. I was so touched by his taking that moment to try to console me just because I was so emotionally upset when he looked like he needed immediate attention himself. His face was pretty banged up.

Senator LAUTENBERG. Mr. DeLegall, would you want to make a summary statement? If you would, just tell us what car you were in.

SECOND WITNESS' EXPERIENCE

Mr. DELEGALL. I think I was in the fifth car. One thing I do remember, there was an attempt to stop the car. I remember hearing brakes screeching and the car lunged forward as though the engineer was trying to stop it, and it continued going forward. Our bodies were thrown forward.

Senator LAUTENBERG. You were conscious of the brakes being on before the impact?

Mr. DELEGALL. Yes; and conscious of the impact which continued for what seemed to be maybe a half a minute.

At first I thought it was simply somebody pulling the emergency brake. As my body was thrown forward, I was waiting for it to return back to its normal position when the train came to a halt. That never happened.

I fell forward. Bags were falling on people off of the overhang. I remember the chairs, themselves, coming loose from their mooring and turning around, as though people were sitting in groups of four.

We were able to get out by a window. The emergency exit, and also by the door. One of the conductors was able to open the door. He had come from the cars ahead. I remember his face was streaming with blood and his ear was injured, but he was able to open the door. Someone offered him some aid, but he refused the aid and stayed there at his post, so to speak, until people were able to be lowered down into the arms of people from the town who were waiting to get people off who were up on an incline, it seemed to be. I guess about 8 feet from the ground. So it was dangerous to jump from the car. There were people inside who were lowered down.

Senator LAUTENBERG. Was there any fire or smoke at that time?

Mr. DELEGALL. Yes; in fact, that is what caused the panic in my car. At first we thought it was a simple derailment, sort of simple. But when we looked out the window and saw fire on the ground, then people began to think there might be an explosion. So there was panic to get off the car and get away, as far away as possible to avoid the explosion.

But as far as the crew itself was concerned, I only had experience with one conductor, and he was doing his job during the entire time.

Senator LAUTENBERG. Giving instructions and trying to console people and so forth?

Mr. DELEGALL. Not so much, he seemed to be in a daze. But he was just standing there at the door. People seeing the conductor all went in that direction because we weren't sure how to get out.

EXIT MARKING

Senator LAUTENBERG. There was no indication of where the exits are, there was nothing you could see that enabled you to make some decisions about helping yourself or helping others?

You said, Ms. Kaminski, there was no instruction on that.

Ms. KAMINSKI. No.

Senator LAUTENBERG. One thing we want to do is make sure something like this doesn't occur again. One of the things that I mentioned was perhaps just a runthrough of what to do in the event of an emergency. Somebody listens, if anybody listens, then you save a life or save somebody's well-being, it seems it's worth the moment of having to listen to the message.

I listen to the airplane message, even though I travel so frequently it's implanted in my mind and I think I know what to do.

Mr. Capon, you are here representing a rail passenger group, right?

Mr. CAPON. Two points that come to mind. One is to your excellent suggestion about a runthrough to passengers. While it is true trains make a lot of stops, it seems to me one or two judiciously placed announcements during the trip from New York to Washington, perhaps three from Boston to Washington, you would probably hit 80 percent of the passengers on the train, which could have a dramatic improvement in terms of people knowing what to do.

For example, every several windows there is a big red handle at the top designed for people to pull it out. If an announcement was made to that effect once or twice during the trip, that would certainly be an improvement over the present.

RADIOS

The other thing that struck me is the fact that radios keep coming back. We had a radio problem with the Montrealer in 1984, we heard about a radio problem last October in Wisconsin. Now we have a radio problem with the Conrail engine.

I don't know what it is going to take to get crews to refrain from going out on the main line without a working radio. Obviously, it's going to take some attention from management on maintaining the radios, as well.

I think basically the major points in terms of speed control, of separating through freight trains wherever possible, of monitoring the highway driving records—I discovered that the national driver register which is already available to states where when you go to apply for a driver's license the state can go to this national driver register to cross-check you as to whether you have violations on a driver's license in another state.

But apparently, the legislation is set up, the NDR as it is called, very strictly limits accessibility to that record. The safety board in 1984 made a recommendation that the FAA seek legislation to enable them to get ahold of alcohol-related offenses.

So I guess, and in my suggestion in my written testimony is that the FRA seek, that Congress presumably addressing the recommendation regarding this should expand that from the FAA to deal with railroads, also.

But I think the fact that the law that established the national register was written the way it is suggests to me there is going to be a tremendous amount of resistance, which I guess you already know, if we can't even get at an existing national driver register for purposes of aviation, we have obviously got a long ways to go to get to the kinds of things Mr. Horn was suggesting, which I certainly agree with.

I think I will leave it there.

Senator LAUTENBERG. If you were limited to making a couple of recommendations, or three, improving rail safety, do three come to mind, or two others besides the availability of the driver data bank to try to sort out those who have lived a life that would suggest based on their willingness to violate the rules, maybe a little attention ought to be paid to their human behavior before they get that kind of license.

NARP RECOMMENDATIONS

Do you have any other quick recommendations?

Mr. CAPON. The two I would recommend are specific to the Northeast corridor with the high-speed trains.

One is the speed control which was in place 10 years ago on the freight trains when they replaced the old electric locomotives that had it with the new diesels, we actually had a backsliding in safety.

References were made earlier to the fact that historically, I guess automatic train stop is sort of a technological grandfather of speed control. I believe it has been around since the twenties or thirties.

The 20th Century Limited operated at 80 or 90 miles an hour through all kinds of weather for many decades. The New York Central, the Chicago, I believe it was actually stated earlier the system was removed after the passenger trains were gone.

The irony is, potentially the greatest threat to the general public from railroad trains is not necessarily a passenger train, it's the possibility that hazardous cargo could explode. That could happen. Union Pacific is running 70 miles an hour with freight trains. That could happen anywhere.

The other issue is separation of through freights and passenger trains. For purposes of classification, this move would have been a through freight, it would not have presumably been there if that separation had been accomplished earlier.

Senator LAUTENBERG. All of us are interested not only in improving the conditions under which people travel, it's fair to say that most people want high speed, but always safe travel. I think we have to be responsive to those needs.

We don't have the airline capacity or the airlane capacity to carry the number of passengers that have to be carried. It's my view, transportation is going to be one of the major concerns of our country in these next couple of decades.

We are too crowded in lots of areas and we are losing more and more time traveling, commuting and so forth. We have to be responsive. One of the ways to do that is to have a good passenger rail system.

Either of you, Mr. DeLegall or Ms. Kaminski, have anything you would like to offer based on your memorable but short experience that would maybe help make things easier for people caught in a similar situation?

Ms. KAMINSKI. Suggestions?

Senator LAUTENBERG. Recommendations for safer travel.

Ms. KAMINSKI. Pretty much what I said before. Emergency exit procedures should be made a little more visible.

I was astounded that in this day and age, it's like the stone age. The railroad industry is literally in the stone age as far as telling people how to exit in an emergency.

Senator LAUTENBERG. Mr. DeLegall, do you have anything you would like to recommend while we have this public forum to do so?

FLYING BAGGAGE

Mr. DELEGALL. I think that a number of people were hurt badly by flying luggage. People put luggage up on those overhanging racks that they can barely lift.

The weight of those bags falling on people is really a danger that can happen not only in an accident but by applying brakes in an emergency situation. So I think some concern should be given to utilizing luggage compartments.

Senator LAUTENBERG. A good suggestion.

Mr. Capon, is there a question of flammability of upholstery curtains or otherwise that your organization has addressed?

Mr. CAPON. My limited knowledge on that is that the Bay Area Rapid Transit System, I think, went through that about a decade ago. It's my general understanding that in the wake of their experience, that regulations have been established and that Amtrak is in conformance with them.

But this is not a fully informed response, and I will look into that.

Senator LAUTENBERG. Is that true, Mr. Claytor?

Mr. CAPON. Yes; I understand it is.

Senator LAUTENBERG. The materials used are nonflammable materials?

Mr. CAPON. Yes, sir.

Senator LAUTENBERG. I want to thank all of you, particularly those of you who have experienced the horrendous moments that you did.

And you, Mr. Horn. Our gratitude for putting aside for the moment your own personal grief in the interest of society.

We respect very much your willingness to come forward and we thank everybody for undoubtedly what appeared to be one of the lengthier hearings around, but hopefully also one of the most productive.

We will be following it up. There is a question about the availability of the committee's proceedings.

We have asked for as quick a turnaround on the transcript as possible, but we will have to check with the committee counsel as to its release.

This is, after all, a public record, it's all been heard and recorded on television and broadcast, so we want to make it available because we invite further commentary from any of the witnesses who have been here.

We will always welcome your suggestions, even if the record, after the record has been closed, particularly from all sides of the ledger, passengers, employees, management and government agencies. We thank you.

SUBMITTED QUESTIONS

[The following questions were not asked at the hearing, but were submitted to the agencies for response for the record:]

FEDERAL RAILROAD ADMINISTRATION

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

CRITIQUE OF FRA'S SAFETY PROGRAM

SENATOR LAUTENBERG: Item: FRA gives the carriers a grace period to correct any defects discovered by field inspectors or reported in complaints despite the fact that Federal law makes the carriers responsible for keeping all equipment, track, rolling stock, etc. in safe operating condition.

ANSWER: Under FRA enforcement policy, the railroads have no right to a "grace period" before violations are cited and civil penalties are assessed. This misconception stems from two sources: an incorrect, literalist reading of the 1981 Systems Safety Plan and FRA's practice, in certain instances, of noting technical infractions without citing for penalties.

The power to levy penalties is used when, in our best judgment, the violation is of a serious nature, compliance has proven difficult to achieve, or for another reason a fine will best serve the cause of safety. When the same result can be achieved without imposing a penalty, with its concomitant commitment of significant inspector, supervisor, and attorney time, our inspectors often recommend that course of action. Note that FRA's prosecutorial discretion is exercised, in the first instance, at the level of the field inspector and his or her supervisors. The sharp reduction in accident statistics bears good testimony to the effectiveness of their efforts and judgments.

SENATOR LAUTENBERG: Item: Only a minor fraction of all the defects identified are ever submitted as violation reports. For example, in 1984 a total of 292,970 defects (or violations of safety rules and regulations) were recorded but only 3,805 violations were filed for penalty.

ANSWER: FRA prosecutes in excess of 99 percent of all violations referred for prosecution by its inspectors in the field. FRA "prosecutorial discretion" is generally exercised in the field, by its inspectors, virtually all of whom are hired by competitive examination from the ranks of the labor organizations themselves.

Inspectors may write two types of citations -- violations and exceptions. Violations are deviations from Federal standards that are significant from a safety exposure perspective or that reflect a pattern of less serious matters that reflect poor safety practice. When an inspector writes a violation report, he requests that FRA Office of Chief Counsel initiate a civil proceeding to collect a civil penalty. Better than 99 percent of these recommendations result in commencement of the civil penalty process. The remaining one percent are cases in which there is some legal or procedural bar to commencement of an action, i.e., absence of witnesses, etc.

In making these recommendations, FRA inspectors are provided considerable guidance in the FRA General Manual, in specific discipline (e.g., track and motive power and equipment) manuals, and in technical bulletins issued by the FRA Office of Safety. FRA inspectors also bring experience, expertise, and judgment to this process. Only he or she has crucial facts available in making the decision whether to recommend that civil penalties be assessed in a particular case.

But FRA regulations are very literal in their drafting, and it has long been the agency's practice to write up a report on any deviation from standards, no matter how small, e.g., a deviation in gage of one quarter inch unnoticeable to anyone riding the track. Nevertheless, FRA inspectors will write up a report on such deviations, to emphasize their insistence on literal compliance, and to give railroads early notice of small deviations that might become more significant with the passage time. These informational reports are called "exceptions," and inspectors write several hundred thousand exceptions each year. It is this practice of writing "exceptions" that RLEA refers to in arguing that FRA prosecutes civil proceedings on only a small percentage of the deviations found; in reality, FRA prosecutes more than 99 percent of all violations, and the reasons for not prosecuting the "exceptions" should be obvious.

Inspectors are particularly sensitive to any effort by the railroads to take advantage of prosecutorial discretion. Cooperation by the railroad is a major factor bearing on fine/don't fine decisions, and FRA's proposed Safety Act Reauthorization would give the Administrator the right to levy a higher civil penalty on railroads that attempt to abuse FRA's exercise of that discretion.

SENATOR LAUTENBERG: Item: FRA relies almost exclusively on civil penalties although you also have the authority to issue emergency orders (Note: to remove unsafe facilities or equipment from service), and compliance orders (directing compliance with the Railroad Safety Act of 1970), and to seek injunctions.

ANSWER: FRA uses the tool that will most effectively and efficiently accomplish the safety objective presented in any given situation. As Congress envisioned, civil penalties serve as the backbone of the rail safety program, but the more extraordinary powers are used wherever required and appropriate. The consistent improvement in railroad safety numbers over the past three years is testimony to the effectiveness with whch we utilize those resources.

The emergency order power, whether used or not, serves the agency well. FRA has been fortunate in not having to resort to its use in recent years; the threat of its use has been sufficient to permit FRA to reach negotiated agreements, achieving its objectives. FRA used this technique to achieve the SEPTA hollow axle retrofit in 1986, and the haz mat tank car recall in 1985. Indeed, our use of top priority civil penalties has served as a clear warning that an emergency order will be issued if prompt, decisive railroad action is not taken.

One successful technique FRA has used for the past seven years has been railroad system assessments in which FRA focuses on an entire railroad, or a major portion of a large railroad, from top to bottom. Improved safety performance has consistently been the result.

In addition, FRA inspectors are empowered to issue special notices for repair, which under FRA regulations remove equipment from service or impose slow orders on track. During the past twelve months, this authority was used 256 times.

FRA has not found compliance orders or injunctions to be necessary to achieve compliance since neither can be made effective as swiftly as the emergency order, which is issued ex parte. Only if confronted with a non-emergency situation in which penalties would not be helpful, would FRA be likely to use one of these tools.

SENATOR LAUTENBERG: Item: FRA negotiates the amount of any penalties assessed. As a result, the actual penalties imposed are significantly below the assessments recommended in violation reports, often by as much as one-half.

ANSWER: Before passage of the Federal Claims Collection Act in 1966, the government was forced to litigate every single rail safety violation to collect any civil penalties. In the Federal Railroad Safety Act of 1970, Congress recognized that that process was an inefficient way to promote safety; accordingly, Congress authorized FRA to compromise civil penalty assessments under that statute, as the agency had begun to do under the Claims Collection Act. FRA has used that authority creatively so as to most effectively promote safety.

Of course, the FRA's compromise authority under the 1970 Safety Act was designed to permit the agency to avoid litigation, which had impeded prior enforcement of the safety laws. FRA uses the civil penalty negotiation process to promote safety. FRA insists on thorough case-by-case negotiation to ensure that the safety lessons to be learned from the civil penalty process are not lost by focusing merely on the dollars to be collected. Thus, the merits of each case are considered, and the settlement reached reflects a weighing of any defenses or arguments in mitigation. To ensure that the process is educational and provides a forum for communication about current compliance problems, settlement conferences are held with the larger carriers, which include technical staffs and management. This experience benefits both parties and promotes future compliance.

The other option, of course, is litigation. As in the private sector, litigation is the result of a failure to reach a reasonable compromise; it is, of course, always a more costly route for all parties. The first objective of the Department's enforcement programs is to promote safety, and to do that it must make effective use of its resources. Litigation is not often the most effective use. But where necessary, i.e., where a compromise that serves the public interest in safety cannot be reached, FRA will go to court.

SENATOR LAUTENBERG: Item: FRA almost never takes a carrier to court for safety violations.

ANSWER: That is correct. Railroads rarely take on the agency, because they know we have almost a 100 percent winning percentage in enforcement litigation.

Going to court on safety violations represents a failure of the process. It has the effect of focusing the use of an enormous proportion of FRA's safety resources on a very small proportion of our caseload. Of course, FRA is ready to pursue civil penalties in court if necessary, and it has threatened to do so on numerous occasions in recent years, but the railroad or shipper ultimately accepted FRA's terms before we had to file suit.

The one recent exception has been one railroad's refusal to pay on a hazardous materials case because it believes the relevant statute permits the negligent transportation of hazardous materials. That case is still in court; two and one half years after it was filed, it is just getting to the appellate court. We intend to seek a resolution of that matter legislatively.

SENATOR LAUTENBERG: Item: FRA's civil penalty process is characterized by protracted delay and inadequate recordkeeping. As a consequence, FRA cannot manage its violation caseload efficiently and does not keep its regional offices and inspectors informed of disposition of the cases they originate.

ANSWER: These allegations are groundless. FRA manages the civil penalty process with care (as explained in the more detailed discussion below). Such an enterprise is labor and paper intensive -- if the job is to be done effectively. Our intention is that the process actively serve the cause of safety; otherwise, it is merely a game or a cost of doing business for the railroads. For that reason, FRA insists on careful, laborious, case-by-case negotiation of every claim on the table during a negotiation session. The point is not merely to negotiate a bottom-line settlement figure. Instead, that figure is symbolic of the underlying safety issues that concern FRA; of their number and severity; and of the railroad's response, whether it be stepped up inspections, improved maintenance or training, better organization, or better performance that FRA can verify.

This careful approach takes time. Each potential safety claim represents a potential lawsuit. Therefore, our inspectors must invest considerable time investigating and documenting each case for which they recommend prosecution. No railroad will pay a dime on any case not fully supported by evidence admissible in court. FRA attorneys devote significant time to assessing the legal sufficiency of the proposed claim and the appropriate penalty to be assessed. As in any civil suit, the railroads need time to investigate FRA's allegations and to prepare their responses. With the larger railroads, periodic settlement conferences are held at which both sides can present their stories and the safety issues can be thoroughly explored. A positive measure of the quality of the FRA civil penalty process is how infrequently a successful defense is mounted by the railroads. Improving safety statistics are another measure.

The charge of poor recordkeeping is puzzling. After many years of manual recordkeeping, we began implementing a computer-based violation tracking system four years ago that has served us exceedingly well for monitoring, reporting, and recordkeeping purposes. It enables each inspector to keep track of his own violations. In fact, for the last three fiscal years, our annual report showing all cases closed has been generated by this computer system. And the data provided in response to these questions for the record and in response to the many other requests we receive regularly are provided by this system.

The system has three points of data entry:

o Data from the regional memo transmitting a violation report to the Chief Counsel is entered, including:

Date received
Region
Inspector name
Inspector report number
Railroad or shipper name
Date of violation
Location of violation
Type of violation
State cases

- Data from the FRA demand letter is used to assign the entry previously made to an enforcement case file:

    Enforcement case number
    Original civil penalty demand
    Date of transmittal
    Top priority designation

- Closeout information is entered after settlement:

    Settlement date
    Settlement amount
    PRCA amount, if any terminations
    Claim numbers of any terminations

The system enables us to answer a wide variety of ad hoc data requests from the press, the Congress, the GAO, the IG, and others who often want information, usually in a form by which it has not been maintained. More important for us, however, we can make ad hoc data queries to assist us in managing our caseload. For example, the computer can give us print-outs by carrier, by region, by type of violation, by inspector, by date of receipt or transmittal, and so on.

Of course, this system permits us to keep the FRA regional offices fully informed of the status of their violation reports. Our Chief Counsel's Office provides them with monthly reports of (a) all violation reports received, (b) all cases transmitted to railroads and shippers, and (c) all cases closed. In addition, they receive the annual report of cases closed. And, of course, they may discuss any pending case with the responsible attorney at any time.

The Civil Penalty Process

The civil penalty process begins with the FRA and state inspectors. When an inspector detects a deviation from an FRA safety standard while inspecting a railroad or shipper facility, he may choose to file an informational "inspection report" (the normal choice in the vast majority of cases) or, if he determines that a penalty is appropriate, to prepare a "violation report" recommending assessment of a civil penalty, which after review in the region is forwarded to the Chief Counsel's Office for action. Thus, FRA's prosecutorial discretion is exercised primarily by our safety inspectors and their supervisors in the field. Any one violation report may contain from one to 50 or more individual violations.

The Office of Chief Counsel reviews the violation reports for legal sufficiency, then aggregates similar violation reports into a single case that is transmitted to the railroad or shipper under a penalty demand letter or, if a hazardous materials case, a Notice of Probable Violation.

After a respondent conducts its own investigation and formulates a position, we conduct negotiations during which a respondent presents defenses or arguments in mitigation and settlement offers are exchanged. If settlement cannot be reached, the cases are referred to the Department of Justice; as a practical matter, however, nearly all cases are settled. (The one exception is HMTA cases, which are normally concluded not by settlement, but by issuance of an order of assessment predicated on a finding of a knowing violation and which permit a formal hearing on FRA's allegations before an administrative law judge and an appeal to the Administrator prior to litigation in the courts.)

With larger railroads, our general practice is to aggregate claims for negotiation at periodic settlement conferences. This process has several advantages. First, aggregation permits time economies of scale without which the process would stretch on interminably. More important from the perspective of safety, this method permits FRA to achieve a broader view of a railroad's compliance with our safety requirements than can be realized by focusing solely on a limited number of individual violations.

On any given day there are violations at every stage of what is a continuous process. That is, inspectors are investigating, gathering evidence, submitting violation reports for typing and review by their supervisors; the Office of Chief Counsel is receiving reports and handling them clerically (nearly 7,000 in FY 1986), including logging them into our computer-based violation tracking system developed in 1983; law clerks are administratively processing violation reports, aggregating them into enforcement cases, and initially reviewing them for legal sufficiency; attorneys are reviewing cases and signing them for transmittal to the respondent or for return to the field if found to be legally insufficient or if additional work is needed; railroads and shippers are acknowledging receipt of claims and conducting their own investigations of the charges; FRA attorneys are conducting negotiations with respondents based on any legal defenses or mitigating circumstances they present and on FRA's assessment of the worth of the case based on such factors as the safety hazard, severity, and remedial measures taken; the parties are making offers and counteroffers of settlement and settlements are being reached; and, occasionally, the agency is engaged in litigation over a claim.

In this process, we adhere to several guiding principles:

- A civil penalty is imposed to achieve a safety-related purpose. The penalty should be sufficient to prompt action that will reduce the likelihood of similar violations in the future.

- To achieve some measure of efficiency, cases are usually aggregated for the purpose of negotiation.

- Despite this aggregation, we insist on thorough case-by-case negotiation to ensure that the safety lessons to be learned from the civil penalty process are not lost in the process of lawyers' haggling over dollars. Thus, the merits of each case are considered, and the settlement reached reflects a weighing of any defenses or arguments in mitigation. The overall percentage reached with a given carrier, therefore, is merely the sum of hundreds of individual decisions regarding the settlement worth of individual cases.

- To ensure that the process is educational and provides a forum for communication about current compliance problems, settlement conferences are held with the larger carriers, which include their technical staffs and management. This experience benefits both parties and promotes future compliance.

- Civil penalties are assessed in accordance with the statutory maximums and minimums and applicable penalty schedules and guidelines. Where appropriate, penalties are compromised under appropriate statutory authority in accordance with such criteria as severity, culpability, history of offenses, remedial steps taken, financial condition, and presence of defenses or mitigating circumstances. All compromises are approved and countersigned by the Assistant Chief Counsel for Safety who also authorizes assessment reductions and signs all final Orders of Assessment in hazardous materials cases

- The course of negotiations and the bases for settlement are all fully documented in each case file to assure that the agency's reasoning in a given case is auditable. Case files closed during the current and the previous fiscal year are retained; at any time, enforcement case files are available for the vast majority of violations committed during the past two to three years.

SENATOR LAUTENBERG: FRA has no procedures - aside from occasional spot checks - to assure that initial terminal tests and predeparture inspections are actually carried out by qualified personnel. Do you care to respond?

ANSWER: FRA does not and should not monitor every predeparture inspection on the thousands of freights that operate weekly in this country. Moreover, we believe that train crews understand the significance of these inspections and know of no data suggesting that they are not being performed in a timely and effective manner. The Gates-Cromwell experience is an isolated one--we have not seen the improper performance of a predeparture inspection appear as a factor in other accidents.

We monitor the carrier's inspection and repair practices on a regular basis. When it is determined that a specific carrier or a specific location is not in compliance with Federal Safety Requirements further action is taken. This action can take the form of small task force assessments, violations, emergency orders or a notice of noncompliance.

CRITIQUE OF FRA'S SAFETY PROGRAM

SENATOR LAUTENBERG: Item: FRA's inspections force is too small and poorly deployed. The 1977 FRA System Safety Plan assumed 800 positions for the inspection force. You currently have 325 inspector positions.

ANSWER: In discussing FRA's inspection force, it is essential to remember that the vast majority of inspection activity is carried out by rail employees, not FRA inspectors. Given the number of inspections conducted by FRA compared to all inspection activity on the railroads, FRA's effort can be considered one of monitoring the inspection activity of the railroads; FRA enforces the rules but the carriers are actually responsible for the proper inspections. In addition to FRA's 325 inspectors for all areas of railroad safety, the railroads have approximately 35,000 people devoted solely to track maintenance, some 5,000 of whom are inspectors.

FRA's "Safety Inspector Staffing Study" is a thorough analysis of how large the Federal inspector staff should be and how inspectors should be distributed among the eight regions. Statistical analysis was used to relate carrier operational trends to the number of inspectors necessary to assure that railroads comply with Federal regulations. The railroad environment has changed significantly since the 1977 Systems Safety Plan by events like deregulation, railroad mergers, and the starting of new short line railroads.

There were more than twice as many accidents in the late '70's, and three times as many "hardware" accidents-track, signal failure, etc. In addition, volumes have declined about 20 million tons per year since then. With the mergers and consolidations of major carriers, needs today are not comparable to 1977.

More generally, however, we have no idea what factors prompted suggestions of a number like 800.

FRA has recently instituted new procedures and modeling techniques to more effectively manage the resources available for the inspection of the industry and the enforcement of FRA's rail safety program.

To ensure that the resources are appropriate to the problem, and to further ensure that those resources are properly distributed, FRA has developed a Safety Enforcement Staffing and Allocation Model consisting of three distinct elements.

The first element is the Safety Enforcement Staffing model. It compares the performance of inspectors against accidents and casualties, normalized by revenue ton-miles to determine the marginal return per inspector at various levels of inspector staff level by demonstrating the point at which increasing marginal returns per inspector would become decreasing. When historical work measures were compared against historical productivity per inspector, the result was a justification for 330 field professionals with a correlation of .97.

This finding does not take into account the possible need for more inspectors when new responsibilities are created from new rules such as the alcohol and drug rule. Also, if the industry failed in the future to comply with Federal regulations to the extent they are complying today, more inspectors might be needed to assure compliance. Accuracy of the staffing model is dependent on railroads maintaining their current level of compliance with railroad safety requirements.

The second element of the staffing model determines the optimal allocation of the inspector staff throughout the eight FRA regions. The model bases its allocation on the principle of risk as determined by:

- casualties
- accidents
- employees
- tons
- size (square miles)
- carloads of hazardous materials
- population density
- passenger traffic
- railroad mileage

The third element takes each regions' staffing level and allocates it among the five inspector disciplines, or areas of specialty. It uses inspector activity and territorial differences, as measured by the following five factors, to divide the resources among the five disciplines:

- reports filed
- violations issued
- complaints handled
- inspections conducted
- other

The three elements of the model are viewed sequentially. The first element determines the total amount of resources available. The second element takes the number from the first and allocates the resources among the eight regions, and the third takes each region's allocation and divides it among the five disciplines.

In addition to the allocation models, the Office of Safety has instituted a regional productivity measurement and improvement procedure beginning in calendar year 1987, in conjunction with the annual National Inspection Plan. This procedure measures work units produced per hour to track, compare, and improve the productivity of the available inspector resources. It allows comparisons among regions, and eventually from year to year, so that management can target specific problem areas requiring improvement.

The sharp annual decrease in railroad accidents over the past three years is the best evidence of the adequacy of our inspection forces.

FRA ENFORCEMENT AUTHORITY

SENATOR LAUTENBERG: Should FRA be given authority to impose penalties directly on individual railroad employees for disabling safety devices or other violations of safety regulations? Should disabling a safety device be made a criminal offense?

ANSWER: FRA should be given the authority to impose penalties on individual railroad employees just as it may on railroads. It is a simple fact that safety is a shared responsibility between management and labor, between individuals and corporate entities. A statute granting enforcement authority over half that equation can never be more than half effective. Accountability must extend beyond the amorphous corporate entity to the individuals who run the railroads as it does in the FAA and under existing hazardous material safety statutes. I want to reserve judgment on whether disabling a safety device should be made a criminal offense, although I am inclined to believe that it should.

ALCOHOL AND DRUG REGULATION

SENATOR LAUTENBERG: Are the recently implemented FRA regulations to make sure personnel "under the influence" are stopped from going to work adequate?

ANSWER: There are, unfortunately, no complete answers to the problem of substance abuse. However, the data compiled over the problem year of testing suggests that the rule has produced substantial behavior modification in the industry. While it is difficult to make a nubers comparison, since the data was not available prior to the FRA post-accident testing provisions, the situation in the industry is unquestionable better.

Between February 10, 1986 and January 15, 1987, FRA obtained samples for toxicological analysis from 759 employees, following 175 major accidents. Of these tested, only 9 (1.2%) tested positive for alcohol and 29 (3.8%) tested positive for illicit drugs (marijuana, cocaine or methamphetamine). In the years considered for the FRA rulemaking (1975-1984), FRA review of autopsy data for railroad employees killed on the job in train incidents showed the presence of appreciable levels of alcohol or drugs i 16 percent of the cases. In addition, FRA found that about 9 percent (3 of 33) of the most serious train accidents resulted from alcohol use.

The Southern Pacific Transportation Company has maintained data on its urine testing program after human factor accidents. The SP program is similar to FRA's program of reasonable cause testing. The SP reports a reduction in its alcohol/drug positive rate for transportation department employees from 22.4 percent in August of 1984 down to 5 percent in the current period.

While significant progress has been achieved as a result of the FRA regulation and railroad efforts, it is doubtfull that the FRA and the industry can get below these levels without a program of random testing. The identification of drug users based on signs and symptoms is very difficult for many reasons, including the sometimes rapid dissipation of symptoms after the use of certain drugs. For instance, in the Chase, Maryland, accident, the engineer and brakeman on the Conrail train were interviewed by a supervisor shortly after going on duty and prior to the accident. This supervisor was trained in detecting the signs and symptoms of drug use, but took no exception to the employees. Post-accident testing of both ot these employees found evidence of marijuana use in their blood and urine.

FRA has obtained data indicating the use of illicit drugs in 3.8 percent of the accidents with documented post-accident test results. The 3.8% chance of encountering a drug using engineer is not acceptable and calls for further action on the part of the Federal government. Secretary Dole has announced her intention to propose random drug testing, where appropriate, across all transportation modes.

SENATOR LAUTENBERG: The FRA drug and alcohol rule now in place prohibits employees from reporting for covered service or remaining on duty while under the influence of or impaired by alcohol or controlled substances. The rule also provides for drug and alcohol testing for "reasonable cause" which includes reasonable suspicion based on observation of employee behavior. When a train crew reports for duty, to whom do they report?

ANSWER: The practice of to whom train crews report varies considerably throughout the industry. Factors that are involved include the location, time of day, day of the week, yard service, road freight service, passenger service, and the assignment of the specific individual (engineer, fireman, conductor, or trainman). It is not uncommon for various crewmembers to report at different locations. The engineer must report where the locomotives are located while the conductor must report to an office for instructions. While it is difficult to generalize, the conductor normally reports in person or by phone to a yardmaster, block operator, or dispatcher. The balance of the crew normally receives instructions form the conductor. The engineer may receive instructions from an enginehouse employee, yardmaster, or a relieved engineer on the location of the motive power assigned to his/her crew.

SENATOR LAUTENBERG: Are train crews required to check in with supervisory personnel before taking control of a train and departing the terminal?

ANSWER: Your recommendation that train crews "be required to check in face-to-face with a supervisor when they come on duty" presents a more difficult issue. That is presently done in the great majority of cases. There are, however, crew changes taking place at remote locations in the Western states, or at late hours of the evening, where it is a practical impossibility to have supervisory personnel available for crew inspection. Moreover, the limitations on such inspections draw into serious question the value of attempting a nationwide restructing of railroad crew change practices to address the small number of cases where such face-to-face inspections are not practical under today's operating environment. In the Chase, Maryland accident, for example, both Conrail crewmembers were met by a supervisor specially trained in spotting drug-related symptoms on reporting for duty. After talking with and observing the employees, he approved their fitness for work. As you know, just a few hours later, both employees tested positive for the presence of cannabinoids in their urine. This simply illustrates how difficult it is to detect drug impairment through the observation of visible symptoms. While I certainly agree that such observations should take place wherever it is practical to do so, their effectiveness in detecting drug abuse is limited, and they are not a substitute for random testing.

SENATOR LAUTENBERG: Are railroad officials present around the clock to supervise operations?

ANSWER: At most major terminals, there are officials around the clock to supervise operations. However, at smaller terminals, isolated rural points, officials are not usually present around the clock. Supervision at outlying points is usually provided on an intermittent basis.

SENATOR LAUTENBERG: If the purpose of the rule is to keep employees under the influence of alcohol or drugs out of service, doesn't it make sense to have train crews check in with the appropriate officials before they take control of a train and depart?

ANSWER: The limitation inherent in individual check inspections are illustrated by the Chase, Maryland, accident. The FRA's regulations require supervisors who will initiate testing based on reasonable cause to have training on signs and symptoms of drug use. A supervisor, who was trained, interviewed the engineer and brakemen on the Conrail train shortly after they went on duty and only about an hour before the accident. He took no exception to the condition of the employees. Moreover, even if each person was checked when reporting, there is nothing in the process to prevent a person from using something after boarding the train. The bottom line involves changing human behavior, which FRA is addressing through its regulations and the Operation Red Block program. The great majority of railroad employees are, in fact, interviewed upon reporting for duty. The benefit of requiring additional checkins is at best highly questionable.

SENATOR LAUTENBERG: Do you have data on how many train crew personnel have been prevented from going on duty since the new regulations went into effect?

ANSWER: Not at present. We have required the railroads to include information on the number of observations, results of observations, breath tests, and urine tests in their annual report on operational tests and inspections. This report is required to be filed by the major railroads before March 1 of each year. Since the regulation became effective in 1986, the first report with this information will be submitted this year.

SENATOR LAUTENBERG: Can or do FRA inspectors check railroad train crews as they come on duty?

ANSWER: FRA currently has authority to regulate the carriers and not railroad employees. We have instructed our field personnel on the regulations and told them that if they find a person who is apparently unsafe to perform their duties, they should report their observations to a carrier officer and follow up to ascertain that a proper evaluation was performed and the carrier took action under its rules.

SENATOR LAUTENBERG: Should FRA inspectors be involved in this type of monitoring?

ANSWER: No. There are thousands of employees working in positions covered by the regulation, including train crews, dispatchers, operators, and signalmen. FRA does not have and could not acquire the personnel to perform the function, and it should remain a carrier responsibility.

SENATOR LAUTENBERG: Mr. Riley, you have stated that since March of 1986 there have been 174 testing incidents. What have been the results of those tests? Have those tests shown any alcohol or drug traces? If traces have been found, were any of the accidents found to be caused by impairment?

ANSWER: Since February 10, 1986, through January 15, 1987, we had 175 qualifying accidents. Samples were obtained from 759 railroad employees. Nine (1.2%) of the employees tested were positive for alcohol. Our tests for the therapeutic controlled substances showed 14 employees (1.8%) positive, and the tests for illicit drugs yield 29 (3.8%) positive. That is a total of 1.2% positive for alcohol and 6.9% for controlled substances.

As part of our ongoing accident investigations and preparation for our review of the alcohol/drug rule, we are presently engaged in a careful analysis of the data to determine their significance in relation to accident causation. This review will give us a much better picture of alcohol/drug accident involvements.

SENATOR LAUTENBERG: In the FRA rules on drug and alcohol, is there a definition for impairment? If not, why not? Was including such a definition considered?

ANSWER: FRA endeavored to craft its prohibitions in the most objective and explicit form possible. Your will find that this issue was discussed rather extensively in our rulemaking documents. Our final decisions were based on the available scientific evidence. For alcohol, we prohibited any alcohol in the blood at the .04 level or above. However, "impairment" by alcohol is also prescribed, regardless of blood alcohol concentration, since it it possible for some subjects to be impaired or "under the influence" of alcohol at levels below .04.

The issue of "impairment" for other drugs will likely never be settled on the basis of blood levels alone. There are too many individual variances in pharmacological responses to drug doses. Further, for other drugs, unlike alcohol, there is generally no 1 to 1 correlation between blood levels and effects on performance. An expert panel formed by the National Institute on Drug Abuse (NIDA) has attempted to relate dose levels and impairment with respect to highway driving in late 1983, which was early in our rulemaking (report published as Consensus Development Panel, "Drug Concentrations and Driving Impairment," Journal of the American Medical Association, Vol. 254, No. 18 (Nov. 8, 1985)). The panel indicated that more research was required for drugs other than alcohol before a dose-effect relationship applicable to a general population could be determined. Accordingly, we used the term "impairment" to refer to the inability of an employee, as the result of the effects of alcohol or drugs, to perform duties in a normal, acceptable manner. We used the term "under the influence" to refer to the outward, observable effects of alcohol and drugs that might come to the attention of a supervisor through normal contacts with the employee. Both terms are used extensively in highway safety laws and the regulations of other agencies, and both require the drawing of rational inferences from behavior.

SENATOR LAUTENBERG: Do you believe FRA's alcohol and drug rule needs to be modified in light of the recent accident? How?

ANSWER: We want to review our entire experience under the current rule, including the Chase, Maryland, accident, to see what additional measures may be appropriate. We do believe the existing regulatory provisions should be supplemented with a program of mandatory random testing. Let me note that that decision was the product of lengthy internal discussion within the Department over the risks posed by drug use in all transportation modes. The Chase accident was only one factor of many.

SENATOR LAUTENBERG: The current alcohol/drug abuse rule requires carriers to provide employees an opportunity to get professional help before terminating them under Rule G. Do all carriers have a program for treating alcohol and drug abuse?

ANSWER: Under the rule, all railroads now are required to have policies that provide the opportunity for an employee to seek help on a confidential basis, receive a leave of absence for treatment, and be entitled to return to work when the substance abuse problem is under control. Those policies may provide that the employee will contact an outside counseling service to seek help or that the employee should contact the railroad's employee assistance program (EAP) operated by full-time professional staff. Where an EAP is in place, the EAP staff will match the employee with appropriate counseling or treatment resources in the community and monitor and follow up the therapy. All major Class 1 railroads have now established EAP's, some of the which have been in operation over a decade and have served thousands of employees. The smaller roads generally utilize outside resources to provide initial problem identification and guide the course of treatment.

SENATOR LAUTENBERG: Should alcohol or drug related offenses outside the workplace be taken into account in administering bypass agreements?

ANSWER: The FRA regulation provides that the railroads must establish programs for troubled employees to receive treatment for alcohol or drug problems. Two mechanisms are provided to enter--self referral and co-worker report. Once an employee has been identified, a complete evaluation of the individual must be performed. While a carrier could consider outside offenses, it it not required. Since identification has already occurred, the most important step is a thorough evaluation of the individual and establishment of a treatment program. The railroads could consider using outside information to initiate an evaluation of certain employees. Employees that were identified through this system should certainly be offered treatment rather than discipline.

Licensing

SENATOR LAUTENBERG: Is there a system for licensing engineers that run either passenger or freight trains? If not, why not? Should there be such a system?

ANSWER: Lack of legislative authority to directly sanction individual railroad employees precludes the Department from adopting an effective licensing program. If FRA can acquire authority over individuals, it will initiate a formal safety inquiry on licensing, and take whatever action is indicated by evidence received at that hearing.

Despite the problem created by that lack of direct authority over individuals, FRA has been active in promoting a better trained engineer workforce.

All railroads presently file their engineer training and proficiency testing programs with FRA. They are reviewed by our Office of Safety, and comments are offered where deemed appropriate. Efficiency testing of all operating employees is required, and FRA both monitors the results of that testing (in the aggregate) and spot checks individual testing sessions. This is a particular focus in system assessments.

In addition, FRA funded the construction of the most advanced locomotive simulator in the railroad industry. That simulator is located at the Illinois Institute of Technology, and since its completion in 1984, has been utilized full-time to train locomotive engineers.

SENATOR LAUTENBERG: Who certifies that an engineer is qualified? Is it the responsibility of the carrier or the owner/operator of the track?

ANSWER: Each carrier provides training in three key categories: Locomotive operation/train handling, rules governing the train operations (general and specific by line segment and location), and the physical characteristics of the territory. Each carrier qualifies its own employees and provides for periodic rules and efficiency testing.

When an assignment requires a locomotive engineer to operate over another carrier's track, that carrier or owner/operator provides the qualification. In cases where qualification may not have been accomplished, an engineer pilot is assigned by the owning road.

SENATOR LAUTENBERG: Are there industrywide standards on engineer qualifications? That is, does Conrail have the same standards as Burlington Northern? If not, why not?

ANSWER: There is no formal document that is captioned "industrywide standards on engineer qualifications." However, there is a virtual concensus on standards among the major carriers.

We are concerned that railroad operating employees are properly trained and qualified and it is one of the issues we will look at in a special safety inquiry. However, for the Federal government to be effectively proactive in this area would require that FRA be given safety jurisdiction over individual employees.

SENATOR LAUTENBERG: Have you studied the possibility of common carrier licensing? If so, what were those findings?

ANSWER: No we have not.

SENATOR LAUTENBERG: It is the Committee's understanding that the Brotherhood of Locomotive Engineers has suggested standard Federal requirements for engineers. How does FRA feel about that?

ANSWER: As I have previously stated, we intend to examine this issue. However, some believe that this proposal is merely an attempt by the Brotherhood of Locomotive Engineers to obtain specialized Federal recognition by elevating locomotive engineers to be a higher value/elite craft. While others believe that licensing would provide the engineers with a strategy advantage in circumstances of a strike or work stoppage, many carriers have trained officers to act as engineers and conductors in case a strike or work stoppage occurs. We do not share the same view as the Brotherhood of Locomotive Engineers that carriers officers would not be precluded from also becoming Federally licensed for readiness as a countermeasure strategy.

SENATOR LAUTENBERG: Has FRA in an official capacity responded to that suggestion?

ANSWER: No. The BLE has made no formal proposal to FRA regarding engineer licensing.

FRA - SAFETY ASSESSMENT OF AMTRAK, 1984

SENATOR LAUTENBERG: The FRA assessment of Amtrak in the Northeast Corridor concluded that "it is being managed effectively and operated with a high regard for the safety of the passengers".

Yet a number of observations within the report are somewhat alarming especially regarding block station operator trains (Page 13) "... within the just two hours of instruction and throughout the entire training cycle, trainees are told that failure to prevent delays of as little as one minute could result in immediate disciplinary actions".

This suggests that speed is more important than rules compliance. Is this indicative of the general operating attitude?

ANSWER: No, this is not indicative of the general operating attitude on Amtrak's Northeast Corridor. Generally, compliance with both Federal regulations and Amtrak's own operating rules is very good. However, in the wake of the FRA assessment, Amtrak has changed the training program to place the proper emphasis on the importance of compliance with both the operating and safety rules.

SENATOR LAUTENBERG: The FRA Report (Page 13) also stated that regarding the new interlocking control panels, supervisors "were often at a loss to fully explain the functions and capabilities of the equipment". Are employees being adequately trained in the newer high technology equipment being installed?

ANSWER: Amtrak now has an extensive program to train employees to use and maintain equipment being installed on the Northeast Corridor. Some examples of how Amtrak is addressing employee training are as follows:

- ° The reopening of the Signal Training Center at Lancaster, Pennsylvania.
- ° With FRA's assistance, a new comprehensive program has been developed and instituted to train track personnel on the use of the information generated by Amtrak's new high speed track geometry car.
- ° Training of block operators to use the new type interlocking machines is now being accomplished by qualified employees.
- ° FRA is about to award Amtrak a grant to design, develop and implement training programs through labor/management cooperative effort in four areas: (1) maintenance-of-way safety improvements; (2) operating rules training; (3) handling of emergency situations; and (4) dealing with hazards in the work environment.

These are examples of the accomplishments of the FRA assessment.

SENATOR LAUTENBERG: The FRA Report (Page 10) also noted that AMTRAK trains "tend to be operated at speeds in excess of allowable". Not knowing the exactness of "tend", what percent of runs operate in excess of allowable speeds?

Does this mean that the overspeed control equipment is not used or by-passed during operation?

ANSWER: Allowable speeds are the actual operating speeds authorized by Amtrak Timetables and General Train Orders. These speed limits are controlled by the locomotive engineer while under clear signal conditions and are not regulated by overspeed devices.

During the assessment, with use of radar equipment, FRA found 39 percent of the passenger trains exceeding the authorized operating speed. The results of these observations were given to Amtrak management during the assessment. Monitoring subsequent to this notification indicates 12 percent of the trains were exceeding the allowable speed by 3 to 9 mph. With jurisdiction over individual employees, FRA can police such violations far more effectively.

Overspeed control equipment installed on Amtrak locomotives is designed to protect the locomotive from being operated in excess of speeds dictated by design limits and those resulting from cab signal indications.

This overspeed equipment is protected by penalty brake application if maximum speeds are exceeded.

SENATOR LAUTENBERG: Does this mean that the overspeed control equipment is not used or by-passed during operation?

ANSWER: Overspeed is controlled by a governor that is set for each predetermined speed, i.e., normal speed, 125 mph; limited speed, 45 mph; medium speed, 30 mph; and restricted speed, 20 mph.

A tolerance of plus 3 mph is permitted in the governor setting. This tolerance poses no hazard since Amtrak's braking distances are calculated with a 25 percent safety factor, i.e., the required braking distance is determined, in feet, and 25 percent additional footage is added and the wayside signal system installed accordingly.

A tolerance in setting the speed governor is necessary because a train operating at the maximum authorized speed will naturally tend to increase speed on a descending grade. The tolerance provides the engineer a safe margin to control the train speed comfortably. Otherwise, the train would have to operate below the maximum authorized speed (affecting on-time performance) or, where the speed increases as a result of descending grades, endure a series of brake applications (inducing annoying ride quality).

Where speeds are restricted below the maximum authority speeds (e.g., by equipment, civil speed restrictions, or slow orders) the engineer is depended upon for compliance.

SENATOR LAUTENBERG: "Safe and efficient operation of the Northeast Corridor depends upon its highly developed signal and train control system "(page 6). The report states that there is a problem of false proceeds on the corridor, that conditions existed that could lead to even greater false proceeds and that there is a systemic failure designed into the present system that allows a train to operate at approved medium speed of 45 mph when a speed of 30 mph governs the route. Has this been corrected?

ANSWER: The assessment found that a series of false proceed signal indications had occurred as a result of centrifugal relays, defective cables, defective shunt wires, and errors in making connections. The potential for additional false proceed signal indications included cable exposed to mechanical injury at several locations, wooden cases that did not adequately shield signal relays and apparatus from rodents and the elements, and centrifugal relays. These conditions have generally been corrected. This is another example of the impact of FRA's Safety Assessment Program.

The cables have been buried or placed in conduit for protection against mechanical injury. The primary cause of the problem was attributable largely to the vast amount of construction work being performed at that time.

Many of the defective wooden cases have been replaced with modern steel cases that are rodent proof and afford the necessary protection of equipment from the elements.

The centrifugal relay, a complex a.c. motor driven electro-mechanical device 50 or more years old, is used as a track relay in electrified territory. The centrifugal relay is labor intensive to maintain and requires shopping at least once yearly. Most of the centrifugal relays on the high speed tracks have been replaced with state-of-the-art phase selective track circuits.

Additional formal technical training of Amtrak's signal personnel along with proven testing techniques have reduced the concern of errors in making connections as a causal factor in false proceed signal indications.

The condition termed a systemic failure is a result of Amtrak's use of the approach medium cab signal aspect. When the cab signal displays the approach medium aspect, the indication of the wayside signal governs. There are five wayside signal aspects used with the cab signal approach medium aspect. Three of the wayside signal aspects indicate, among other things, that maximum allowable speed is 45 mph and two of the wayside signal aspects, 30 mph. The governor of the automatic train control device is set for 45 mph, therefore, it is possible that the train could proceed at 45 mph in a 30 mph zone.

Amtrak's new signal installations are being engineered and installed so that this condition is eliminated. Meanwhile, the training and testing of employees is adequate to insure that trains are controlled as prescribed by the wayside signal indications when operating under an approach medium cab signal aspect.

SAFETY ENFORCEMENT

SENATOR LAUTENBERG: In the area of enforcement and compliance with regulations the process seems to be a series of negotiated settlements. Do you believe this is an effective way to bring about safety regulation compliance?

ANSWER: Safety statistics over the past seven years -- with a 50 percent decrease in accident rates -- affirm that the level of attention given safety matters as a result of these negotiations has aided safety significantly. Moreover, FRA has had no difficulty assessing maximum penalties where appropriate.

SENATOR LAUTENBERG: Should there be this cooperation arrangement between federal inspectors and industry?

ANSWER: The job of FRA safety inspectors is to elicit the cooperation of all regulated entities in observing FRA regulatory requirements. Performance of that job can involve education, prodding, threatening, contacting railroad supervisors, filing inspection reports, taking equipment out of service, and recommending civil penalties or other legal action. Inspectors have no responsibility for civil penalty negotiations, but do provide valuable technical advice to our attorneys during settlement conferences.

SENATOR LAUTENBERG: What percent of the number reported violations result in penalties being assessed? (Our estimate is 4% or less)

ANSWER: In a typical year, 99 percent of the violation reports submitted to the Office of Chief Counsel result in the assessment of civil penalties.

SENATOR LAUTENBERG: What percent of the "potential collectible amount" is actually collected by FRA? (Our estimate approximately 50 percent)

ANSWER: As explained in our annual report of cases closed during each fiscal year, the "potential collectible amount" represents the total amount of FRA's original penalty demand for all claims in each case. That amount, then, is based solely on FRA factual allegations and penalty schedules established in our regulations; it does not reflect any factual disputes or legal defenses that may be presented by the railroad or shipper.

Thus, the amount actually collected ranges from 0 percent to 100 percent and depends entirely on the facts of each case. No penalty is collected where the railroad can demonstrate an absolute defense or, normally, where the regulatory requirement has been eliminated. Otherwise, a negotiated amount is reached after considering such factors as the severity of the violation; whether a pattern of such violations is present, remedial efforts, whether the violation resulted in an accident or injury, whether an FRA inspector had previously warned the railroad, and the compliance history of the railroad. The percentage collected in each case is readily ascertainable from the attached annual report. Overall aggregate percentages are just that; they tell you nothing about the careful consideration of safety merits, aggravating and mitigating factors, and possible defenses that go into each final penalty amount. Bear in mind that FRA, like any civil plaintiff, normally begins by demanding maximum penalties in all cases.

That shifts the burden of proof on defenses and mitigating factors to the industry. After reviewing those factors, FRA makes its best judgment on proper assessment levels. As a consequence, these resulting figures are not all "compromises" in the normal use of the term.

SENATOR LAUTENBERG: Do you believe that FRA has enough attorneys to handle their existing workload?

ANSWER: Yes.

SENATOR LAUTENBERG: How many cases a month are sent to the Safety Division counselors for settlement?

ANSWER: During calendar 1986, FRA inspectors submitted an average of 560 violation reports each month to the Office of Chief Counsel's Safety Division recommending the imposition of civil penalties.

SENATOR LAUTENBERG: In response to a record question asked in the budget overview hearing last year regarding outstanding claims an answer came back that "despite substantial improvements to the process, the Office of Chief Counsel staff continues to be pressed". Is that still true?

ANSWER: Yes.

SENATOR LAUTENBERG: If the workload is "pressing" is this affecting the settlement process in an adverse way?

ANSWER: No. While our workforce has been stable, significant improvements in productivity have been made during recent years and additional improvements are currently being made. We are exploring the possibility of streamlining the paperwork side of the process by direct use of our computer system in the process, in addition to its data gathering, monitoring, and reporting functions.

SENATOR LAUTENBERG: How long on average does it take to process a violation in which you impose a civil penalty?

ANSWER: The time from receipt in the Chief Counsel's Office to transmittal of a penalty assessment varies considerably, depending on the nature of the particular violation, the size of the pending caseload, and other demands on attorney time (e.g., litigation or regulatory work).

During calendar 1986, our average for top priority cases was twelve days. These are the most serious safety violations. All other violations are handled on a first-in-first-out basis. Overall average processing time during 1986 was 280 calendar days.

SENATOR LAUTENBERG: Rail safety claims arise under a number of rail safety statutes. It is the Committee's understanding that under the Railroad Safety Act of 1970 the maximum fine (set in 1970) was $2500 per violation regardless of the severity. Penalties for violations in the hazard materials area can be $10,000 per day per violation. Do you believe that the $2500 fine is an appropriate level? Do you believe that it works as an effective deterrent to safety violations?

ANSWER: Obviously, after seventeen years of considerable inflation, the deterrent value of the maximum penalty established in 1970 has eroded substantially. For that reason, I believe the maximum penalty should be increased to $10,000, with an additional penalty of up to $25,000 for egregious violations.

SENATOR LAUNTENBERG: According to our latest information FRA collected $3.2 million in civil penalties in 1986 -- or approximately $10,000 for each federal inspector. Do you believe that this is any kind of measure for either safety or productivity. If so, in what respect? If not, why not?

ANSWER: The amount assessed by an inspector has nothing to do with productivity, which is better measured by factors such as the units he inspected and the safety trend in his discipline and geographic area. Nor is the amount of penalties directly related to safety. In 1985, for example, FRA collected approximately $20,000 for each federal inspector, but 1986 appears, according to our preliminary data, to have been about 20 percent safer than 1985. In short, I find that sort of ratio to be meaningless. The measure of our safety program should be safety results themselves, not fine assessments. And the results speak eloquently.

SENATOR LAUTENBERG: Do federal inspectors have discretion as to which cases get sent to Washington for settlement?

ANSWER: As previously explained, our inspectors exercise considerable discretion in deciding what action to take in a given situation, including whether to recommend the imposition of civil penalties.

SENATOR LAUTENBERG: Do inspectors have guidelines as to which cases should be sent to Washington, i.e., by severity or chronic condition? If not, why not? If so, what are the guidelines/criteria?

ANSWER: We rely primarily on the individual inspector's judgment as to what action or mix of actions will most effectively achieve compliance. Guidance for making such decisions is always the subject of our Office of Safety conferences, training programs at the Transportation Safety Institute, and inspector/supervisor contacts in the regions. Such guidance is also addressed in our enforcement manuals. Clearly, inspectors are encouraged to cite violations where they are serious, numerous, or persistent.

SENATOR LAUTENBERG: In 1985 out of $6 million in fines, how much was assessed against Conrail and against Amtrak? In 1986, out of the $3.2 million in fines, how much was assessed against Conrail and Amtrak?

ANSWER: In fiscal year 1985, FRA settled civil penalty cases against railroads and shippers of hazardous materials for a total of $6,142,550 and in fiscal year 1986 for a total of $3,151,140. Of those amounts, the following amounts were collected from Conrail and Amtrak:

	Conrail	Amtrak
FY 85	$ 2,707,340	$ 121,820
FY 86	890,640	77,850

Of course, collection figures for a given year or two are not necessarily accurate pictures of a railroad's safety performance, as collections in a given year may cover cases arising in a number of years, as was the case for Conrail in fiscal year 1985.

SENATOR LAUTENBERG: What percent of violation defects discovered by federal inspectors resulted in fines in 1985 and 1986?

ANSWER: The civil penalty process covers a time line that encompasses a variety of activities. These include:

discovery of the defect and decision to recommend imposition of a civil penalty

gathering and preparation of supporting evidence

supervisory review in the field

submission to the Office of Chief Counsel

review for legal sufficiency and administrative processing

transmittal to the railroad or shipper

investigation by the railroad or shipper

negotiation

settlement

payment

These many events often do not occur in any one year. Thus, the question cannot be answered precisely. Typically, however, we prosecute approximately 99 percent of the violation reports submitted by FRA inspectors.

SENATOR LAUTENBERG: How many times in the past three years did the FRA file a lawsuit in court against a railroad for a safety violation? Why were these suits filed? If no suits were filed does this imply that no railroad seriously violated a federal regulation or that FRA does not have the resources to pursue such suits?

ANSWER: FRA filed no such lawsuits during the past three years. And that implies that FRA is effective in enforcing compliance without the necessity of protracted litigation. Of course, serious violations did occur, but FRA was able to resolve them satisfactorily without resorting to the courts.

This is not to say that we are not willing to go to court. As several railroads are well aware, we stand ready to go to court any time we are unable to negotiate a settlement satisfactory to FRA.

During the past three years, one lawsuit was filed against FRA by a railroad challenging an FRA finding that it "knowingly" violated the Hazardous Materials Regulations. That case is still in court.

SENATOR LAUTENBERG: When a safety complaint is filed by an employee why does FRA require the employee's name?

ANSWER: When investigating a complaint it is usually necessary to interview the complainant to get complete information, especially if the complaint relates to a particular incident that occurred in the past. This is not always so if the complaint relates to an ongoing practice FRA inspectors can observe themselves.

SENATOR LAUTENBERG: Are the employees' names provided to the railroad? Can the railroad that has been reported easily get the name of the employee making the complaint?

ANSWER: FRA's longstanding policy is to never release the names of complainants to the railroads. However, in the very few cases in which FRA cannot establish a violation with documents or its own observations, complainants or other employees often agree to serve as witnesses and to have their identities divulged to their railroads as a necessary part of the negotiation process. No employee's name is divulged without his consent.

SENATOR LAUTENBERG: Does requiring the employee's identity discourage the reporting of violations? Can't the federal inspector determine if the defect or violation exists without having the employee identified?

ANSWER: Most violations reported by employees can be established through documents, railroad admissions, or federal inspector observations. Only when none of these is available does FRA rely on third-party witness statements. In our experience many railroad employees are willing to serve as witnesses despite any risk of retaliation. Of course, such retaliation is proscribed by section 212 of the Federal Railroad Safety Act of 1970.

Permitting the employee to sign a witness statement where the employee is willing and this is the only basis for a claim does not discourage the reporting of violations. Of course, no penalty can be assessed where the employee declines to sign a statement, for in such a case the claim must be dropped for lack of evidence.

SENATOR LAUTENBERG: How many lawsuits did you file in connection with safety violations in 1984, 1985, and 1986?

ANSWER: None. However, we have been embroiled in substantial litigation in recent years:

Hazardous Materials Case

FRA is defending one case brought by a railroad to challenge FRA's finding that the railroad had "knowingly" violated the Hazardous Materials Transportation Act. That statute, enforced by various Department of Transportation agencies in their respective modes, has been uniformly construed by the Department to prohibit violations committed when the railroad or shipper knew, or in the exercise of reasonable care should have known, of the facts constituting the violation. The railroad maintains that it is not liable for its negligent actions with regard to hazardous materials shipments, i.e., that it is liable only if it has actual knowledge of the facts or has engaged in reckless conduct amounting to "willful negligence." FRA and the Department do not believe that Congress intended to condone the negligent transportation of hazardous materials. On October 10, 1986, the district court ruled that the standard advanced by the railroad is the correct one, and remanded to the agency for application of the willful negligence standard. On December 9, FRA filed a notice of appeal and moved the district court to certify the interpretive issue to the appellate court for interlocutory review.

Alcohol and Drug Rule

Rail labor's legal challenge to FRA's Alcohol and Drug Regulations is currently pending before the United States Court of Appeals for the Ninth Circuit. Plaintiffs' basic claim is that the testing provisions of the scheme violate the Fourth Amendment's prohibitions against unreasonable searches. After first entering a temporary restraining order, the district court ruled that FRA's regulations are valid in all respects. The Ninth Circuit enjoined FRA from implementing the regulations pending appeal, but the Supreme Court vacated that order, thus permitting FRA to make the regulations effective on February 10, 1986. Oral argument was heard in July 1986. In December, the court requested supplemental briefs concerning, inter alia, the disclosure of testing results to the public and prosecutors. Those briefs were filed January 9, 1987.

Prosecutorial Discretion

Rail labor has sued FRA seventeen times since 1981, alleging a failure to enforce the safety laws. FRA has prevailed (either by judgment in its favor or through a voluntary dismissal by plaintiffs) in fifteen of these cases. The two cases FRA has lost involved disputed interpretations of the sleeping quarters provision of the Hours of Service Act. In a 1982 case, a district court found the Act to apply where FRA did not believe it did. Without being ordered to do so, FRA subsequently applied the law. In another case, still on appeal, FRA won in the district court on a similar issue. A divided appellate court reversed. FRA has a petition for rehearing pending. In none of these seventeen cases has any court found that FRA has abused its prosecutorial discretion.

While FRA has been enormously successful in this litigation, the price necessarily paid for this success has been the diversion of inordinate amounts of time and energy from its substantive safety duties.

FRA's safety attorneys take an extremely active role in litigation in order to ensure that their expertise in the unique area of rail safety law is brought to bear on the case. While their hands-on participation in the litigation has yielded considerable benefits for FRA, it has also substantially lessened the time available for those attorneys to accomplish their other duties, *e.g.*, review of reports of alleged safety violations, negotiation of civil penalties, drafting regulations, and providing guidance on the enforcement of the rail safety laws. The litigation has also been a drain on the time of many FRA safety inspectors, who worked very hard to investigate charges made in certain of the lawsuits and subsequently served as witnesses. Unfortunately, much of FRA's diversion of resources stems from litigation that was not well founded and was, in some cases, completely frivolous.

What is striking about all of these cases is that plaintiffs were never able to establish to a court's satisfaction that FRA had failed to act responsibly in the face of alleged danger to rail employees. In every case in which FRA's alleged arbitrary and capricious failure to take emergency action was actually litigated, FRA won. This was true even in two cases FRA lost on an interpretive question. Even in many of the cases dismissed for lack of standing, the courts ruled or observed that FRA was properly enforcing the safety laws.

The case with the widest potential impact on FRA's safety program was one filed by the Railway Labor Executives' Association in Portland in 1982. Plaintiffs alleged that FRA's enforcement policy, as embodied in the Systems Safety Plan submitted to Congress in 1981, was invalid, and maintained that FRA has an absolute duty to assess civil penalties for each and every violation of the safety laws that comes to its attention. Of course, FRA has never assessed a penalty for every single safety violation, and has always construed the rail safety laws to bestow on FRA a large measure of discretion to determine when and where penalties are needed. The district court dismissed the case for lack of standing, and the Ninth Circuit affirmed. The appellate court emphasized that the federal courts cannot supervise the enforcement of the rail safety laws, and nothing in those laws indicates that Congress intended to subject FRA's prosecutorial discretion to judicial review. Of course, this sweeping ruling on standing had no bearing on the right of an employee to apply to a court for an order directing FRA to take emergency action where necessary. That right is embodied in section 203(e) of the Federal Railroad Safety Act of 1970.

Carmen Cases

The Brotherhood of Railway Carmen brought six cases in various locations across the country where its members had recently lost their jobs. In virtually identical pleadings, plaintiffs charged that, as a result of the furlough of carmen, train inspections were now being done by trainmen, whom they alleged to be unqualified. Except for two cases abandoned by plaintiffs after initial pleadings, the courts unanimously ruled that plaintiffs lacked standing to press their non-emergency claims. Moreover, three of the courts ruled that plaintiffs had failed to demonstrate an imminent hazard sufficient to warrant an emergency order, and observed that FRA was appropriately assessing penalties for hauling defective cars. In a case arising out of carmen layoffs in San Diego, the court also found that trainmen were competent to perform the required inspections. The San Diego judge also opined that the case was not really a safety matter but a labor dispute prompted by the employees' desire for job security, an opinion shared by at least one other court.

Sleeping Quarters Cases

Six of the rail labor cases involved allegations that particular employee sleeping quarters were too close to hazardous materials switching and/or not clean, safe, and sanitary. Most of these cases have turned on interpretive issues such as whether the facility was one Congress intended to include within the sleeping quarters provision of the Hours of Service Act. The two cases FRA lost were such disputes. In the first, once the court ruled that FRA had jurisdiction, FRA acted promptly to determine whether the quarters should remain in use. Ultimately, the railroad ceased its use of the quarters at FRA's request. The second case is currently the subject of a petition for rehearing; FRA believes that the district court and dissenting appellate judge correctly read the law.

Many of these cases include allegations about sanitary conditions (e.g., cleanliness of bathrooms and malfunctioning septic systems) and conditions of disrepair (e.g., torn screens) that are an unlikely subject for a federal railroad safety agency, much less federal courts, to regulate. FRA will never overlook the legitimate safety claims of rail employees, but cannot serve as a housing authority.

Miscellaneous Cases

The remaining rail labor cases rested on miscellaneous allegations of FRA's failure to enforce rail safety laws. In one particularly blatant example of forum shopping, rail labor sued FRA in Kentucky seeking an emergency order prohibiting the use of certain uncoupling hooks shortly after the D.C. Circuit Court of Appeals had ruled that the use of those hooks was perfectly legal.

In sum, the litigation instigated by rail labor has been costly and diversionary. As some of the judges in those cases have concluded, much of the litigation has been in furtherance of rail labor's economic agenda. Whatever one thinks of that agenda, reasonable persons would agree that it is inappropriate to foster economic goals by tying up a safety agency in burdensome litigation. Yet, if rail labor's legislative proposal to expand its standing beyond that necessary to protect it from imminent hazards becomes law, FRA expects to see more -- much more -- of the same. The effect on FRA's safety program is likely to be dramatic and damaging.

SENATOR LAUTENBERG: In 1986, you collected a total of $3,151,140 in civil penalties for safety violations. What percentage of the original penalty assessments does this represent?

ANSWER: 53.4 percent of the total amounts originally assessed (POCA). 57.1 percent of the total amounts originally assessed less the amounts assessed for claims terminated (PRCA).

These figures, of course, have no intrinsic meaning, since FRA insists on case-by-case negotiation of all claims in which the merits of each case can be judged independently. When hundreds of claims against one railroad are on the table for negotiation, FRA has consistently refused to "cut a deal" that would save time but eliminate careful consideration of the safety problems at issue.

SENATOR LAUTENBERG: How many railroads have been assessed so far and how many remain to be assessed? Has Conrail been assessed?

ANSWER: FRA has conducted assessments on the following railroads:

Railroad	Initiated	Final Report
New York State	Apr 1982	Nov 1982
Southern Pacific	Sep 1982	Apr 1983
Soo Lines	Sep 1982	Jul 1983
Boston and Maine	Oct 1982	Sep 1983
Kansas City Southern	Nov 1982	May 1983
Port Terminal	Mar 1983	Jun 1983
Western Pacific	Jun 1983	Nov 1983
Alaska Railroad	Aug 1983	Mar 1984
Chicago & North Western	Oct 1983	Nov 1984
Delaware & Hudson	Feb 1984	Dec 1984

Railroad	Initiated	Final Report
*New York City Subway	Apr 1984	May 1984
Amtrak Northeast Corridor	Aug 1984	Mar 1985
Nationwide Amtrak Track	Sep 1984	Jul 1985
Burlington Northern	Sep 1984	May 1985
SEPTA	Apr 1985	Oct 1985
Missouri-Kansas & Texas	May 1986	Report being prepared
Metro-North	Jun 1986	Report being prepared
Norfolk & Western	Jul 1986	Report being prepared

*Special assessment for UMTA by FRA personnel.

FRA does not envision a program to conduct systemwide assessments on each and every railroad. Railroads will be continuously monitored and assessments will be conducted on railroads where a need is indicated.

Conrail has not yet been assessed. It is, however, a candidate for 1987.

SENATOR LAUTENBERG: How do you select the Railroad to be assessed?

ANSWER: The decision to assess an entire railroad comes from FRA headquarters. The following criteria are used to determine the location and extent of assessments:

- o The number of train accidents, separated by cause into such categories as track, equipment, and human factors;
- o The accident rate per million-train-miles. The current rate is compared with the carrier's previous record and the record of other railroads;
- o The number of accidents involving hazardous materials and the hazardous material release rate per million-train-miles; and
- o The monthly number of employee fatalities and other casualties and the rate per 200,000 man-hours worked.

An assessment decision could also result from a serious accident, a complaint, a recommendation from the National Transportation Safety Board or the findings of FRA field personnel.

SENATOR LAUTENBERG: How many system assessments do you perform each year and how do you determine the number of assessments to be accomplished?

ANSWER: The FRA believes that a proper mix of system assessments, smaller-in-scope task force assessments, and regular inspection activities will bring about major improvements in railroad safety. FRA presently performs an average of three system assessments, per year which permits a timely handling of the activities involved in a system assessment along with other necessary enforcement activities.

Assessments require that both field and headquarters personnel be involved in the entire process. Subsequent to determination of the area to be assessed, a meeting is held between FRA representatives (the Associate Administrator for Safety, Washington staff members, and regional personnel) and high-level management personnel (president, vice presidents, general manager and appropriate staff members). A meeting is also held by the FRA and the representatives of affected labor organizations. During both meetings, FRA explains the assessment selection process, presents the statistics or other reasons that touched off the assessment, describes the goals of the assessment, and asks for cooperation in planning and implementing the field work.

A full assessment will usually include an inspection of track, signal system, equipment, operating practices, hazardous material procedures, accident reporting, personnel training, adequacy of employment levels, and a review of pertinent records. It may also include areas or methods not covered by Federal regulations. over several months, the system assessment will involve FRA personnel from every discipline and may require the use of personnel from more than one region. During the inspection process, FRA personnel are normally accompanied by carrier officials, and inspection reports are furnished to the railroad as soon as inspections are completed. If passenger trains travel in the assessment area, their operations are thoroughly reviewed. FRA regional personnel prepare monthly progress reports. Carrier officials and labor representatives are periodically advised of the progress and findings, and unsafe conditions or practices are corrected as they are found.

Upon completion of the field work, a comprehensive report describes the findings of each discipline (e.g., operating practices) or location assessed. This report, prepared by FRA field personnel, provides specific information on the conditions found, the number of inspections, exceptions noted, and recommendations for improvement. After a review by the Washington Office, a post-assessment conference to discuss findings and recommendations is held with carrier officials and labor representatives. A copy of the final report is formally transmitted to carrier officials with a letter highlighting areas that need correction.

Followup inspections are started after receipt of the carrier's response to the assessment report. These activities are to determine the progress made by the carrier to correct items of concern in the initial report.

SENATOR LAUTENBERG: Provide the comparable data for each year from 1979-1985 for the record?

ANSWER: Our computer data base includes data from January 1, 1983; thus, we can easily give you this information for fiscal years 1984, 1985, and 1986. We can also provide the information for the earlier years through a time-consuming manual count; however, we prefer not to expend the necessary resources unless the Committee believes the information is crucial to its work.

	Total Collections	POCA Percent	PRCA Percent
FY 79	$ 2,058,611		
80	15,332,776		
81	1,329,697		
82	2,026,882		
83	2,408,440		
84	3,719,765	50	53
85	6,142,550	55	57
86	3,151,140	53	57

FEDERAL INSPECTORS

SENATOR LAUTENBERG: In the Senate report accompanying the fiscal year 1987 bill, the committee requested that FRA report on its allocation of safety inspectors by region, projected accident rates and risk assessments. What is the status of that report? Do you have any preliminary conclusions you can share?

ANSWER: FRA has completed its part of the Departmental report and has submitted it to the Committee.

The staffing model utilizes statistical analysis to compare carrier trends with FRA work measures. Such correlation analysis provides factors for testing the adequacy of staffing.

SENATOR LAUTENBERG: Does the FRA use a methodology to assign inspectors to particular regions or to specific areas for investigation? If so, how are inspectors assigned? If not, why not?

ANSWER: The staffing model consists of three distinctive parts. The first quantifies the number of professional field staff needed. The second allocates those positions among the eight FRA regions. The third determines the most effective distribution by inspector discipline of safety inspectors within the region.

Inspectors are assigned to a region using the following nine factors from the second part of the model: (1) casualties, (2) accidents, (3) employees, (4) tons shipped, (5) size of territory (square miles), (6) carloads of hazardous materials, (7) population density, (8) passenger traffic, and (9) railroad mileage. The third element of the model takes each region's staffing level derived from the second part of the model and allocates inspectors by the five inspector disciplines. Inspector activity and territorial differences are the measures used in the third part along with: (1) reports filed, (2) violations issued, (3) complaints handled, (4) inspections conducted, and (4) other includes assignments such as: accident investigation, waivers, assessments, and promotion of Operation Lifesaver.

SENATOR LAUTENBERG: Does the FRA have means for evaluating the effectiveness and productivity of its safety inspector program? If so, what is it?

ANSWER: A three-part productivity measurement program was started this year. FRA began the program by adding productivity to its 1987 National Inspection Plan to help managers better define objectives, monitor performance of safety inspectors, and evaluate effectiveness. The second part is a requirement that all Regional Directors submit each month productivity reports covering actual units produced and hours worked. Units are activities completed by inspectors that are measurements of duties assigned and completed. The units produced include: inspections, accidents/incident investigations, violations, complaints, applications, presentations, and administrative duties. Hours counted against units produced do not include Federal holidays, vacations, sick leave, training, and travel time. Hours worked to produce units do include authorized overtime. The last part of the overall program is an annual summary of actual monthly findings for 1987 that will be used as the base year to compare future year performance against. Data from this program will be used to improve the allocation staffing model.

SENATOR LAUTENBERG: How does FRA determine how many inspectors to include in the budget request?

ANSWER: The first element in the staffing model compares the performance of inspectors against accidents and casualties. Data were normalized by revenue ton-miles to determine the marginal return per inspector at various levels of inspector staff size. It then determines the optional staffing level by demonstrating the point of which increasing marginal returns per inspector would become decreasing.

SENATOR LAUTENBERG: Are there enough Federal and State safety inspectors in the field? (325 field inspectors total)

ANSWER: The first part of FRA's "Safety Inspector Staffing Study" provides convincing evidence that the existing staff size is adequate with the exception of the five deputy regional directors positions requested and an alcohol drug training specialist which is not part of the model since the regulation was just created. A least-squares regression method was used to determine how many field professionals are justified to achieve optimal efficiency. When historical work measures were compared against historical productivity per inspector, the result was a justification for 330 field professionals. The correlation is .97. This finding does not take into account the need for more inspectors when new responsibilities are created from new rules such as the alcohol and drug rule. If the industry decided in the future not to comply with Federal regulations to the extent they are complying today, more inspectors might be needed to assure compliance. Accuracy of the staffing model is dependent on railroads maintaining their current commitment to railroad safety.

It has not been possible to date to actually allocate the share of contribution all factors have made to help make the industry safer. These conditions have forced us to assume, for projection purposes, that the past mix is valid and will continue except for improvements FRA implements. Using this assumption, the use of least-square regressions to make one year projections is a practical way to project expected future needs to accomplish specified goals.

SENATOR LAUTENBERG: How many inspector positions did FRA include in its request to the Department for Fiscal Year 1988?

ANSWER: The FRA included 325 inspector positions in its budget request to the Office of the Secretary.

SENATOR LAUTENBERG: Have sufficient travel funds been requested to get the Federal inspectors from out behind the desk and into the field?

ANSWER: Congressional direction, as provided by the House and Senate Appropriations Committee, instructed FRA "to provide sufficient travel funds so that inspectors would have approximately 15 travel days per month." Since that time, including our FY 1988 request, FRA has requested sufficient funding to permit inspectors to travel at least 15 days per month.

SENATOR LAUTENBERG: What is the current onboard strength of the inspection force? How many are on board in each discipline?

ANSWER: Since Administrator Riley came on board the FRA, it has been a priority of his to reach for the first time and maintain on board 325 inspectors. Obviously we cannot anticipate the pace of retirement and recently have had several inspectors retire. As of February 1, 1987, the FRA had a total onboard count of 320 employees assigned to inspector positions and five vacancies. We anticipate locating and filling all inspector vacancies with fully qualified applicants shortly.

The distribution among each discipline is as follows:

Regional Directors	8
Training Specialists	4
Motive Power and Equipment Inspectors	102
Track Inspectors	74

Operating Practices Inspectors	56
Signal Inspectors	41
Hazardous Materials/Inspectors	34
Trainees	1
TOTAL	320

SENATOR LAUTENBERG: How many days a month do inspectors spend in the field?

ANSWER: Generally inspectors speed one or two days per month in the office. The remainder of their time is spent in the field. This may vary with special assignments.

SENATOR LAUTENBERG: Who sets their agenda as to what types of inspections or investigations they are to conduct?

ANSWER: Investigations are prioritized by category, accident investigation being assigned a higher priority than regular inspection, for instance. Individual inspectors prepare their own work schedule based on the priority of the work assigned and their knowledge of their inspection district.

SENATOR LAUTENBERG: What relationship do the Federal inspectors have with train operating personnel?

ANSWER: As former railroad employees, FRA inspectors have railroad experience which give them a better "feel" for what railroad workers are experiencing. FRA inspectors are able to relate to the work performed by railroaders and the train crews realize this.

SENATOR LAUTENBERG: Do inspectors interact with the engineers, firemen, oilers, and other train personnel regarding safety issues? If so, how?

ANSWER: FRA inspectors discuss safety and related items with all classes of railroad employees during the course of investigation and inspections. In addition, inspectors and specialists make presentations to labor groups and answer questions from these groups.

SENATOR LAUTENBERG: Do you believe that FRA has created an environment that allows or encourages train operation personnel to report safety violations to Federal inspectors?

ANSWER: FRA representatives regularly attend meetings of most labor organizations from the local to national levels. Every effort is made to solicit information on possible safety violations from individuals and organizations. this has created an atmosphere where operating personnel can and do freely discuss safety problems. The best evidence of the success of this program lies in the more than 500 employee reports we receive and investigate each year.

Individuals are always assured that their identity will not be revealed to the carrier without their consent.

SENATOR LAUTENBERG: How does an employee report safety violations to the Federal inspector?

ANSWER: Labor organizations and individual employees use a variety of methods to inform FRA about possible safety problems, including letters and telephone calls. Employees occasionally contact the inspector personally during an investigation. Numerous opportunities are present for employees to contact FRA representatives.

SENATOR LAUTENBERG: What happens to these reported violations? That is, what does an inspector do after receiving a violation report?

ANSWER: After he/she is notified of a possible safety-related problem, an investigation is conducted into the allegation. Corrective action, which may include a recommendation for prosecution, will be taken if the allegation has some basis.

SENATOR LAUTENBERG: The subcommittee has been told that when Federal inspectors go out to investigate a safety complaint, they are instructed to limit their inspection to the specific defect alleged in the complaint. Is this true? (Followup if yes or unclear). Does this mean that an inspector who is assigned to investigate a complaint about track condition, for example, would not look for any other possible safety problems while on-site?

ANSWER: No, that allegation is not true. Inspectors are not issued instructions to limit their inspection to the specified defect alleged in the complain, but are instructed to ensure that the problem mentioned in the complaint is thoroughly investigated. Inspectors would observe for other defects in their speciality area and for other defects in the range of their knowledge. A track inspector assigned to a track-related complaint would not go to the locomotive shop to inspect locomotives, but would address a locomotive wheel that he observed was broken.

SENATOR LAUTENBERG: Suppose an inspector were to see evidence of inadequate brake maintenance while inspecting the track. Would this be included in the report? What would he be expected to do?

ANSWER: If the inspector were to observe inadequate brake maintenance, he/she would mention the deficiency to a carrier representative. He/She would also report the defect to the responsible FRA supervisor or specialist to have the appropriate motive power and equipment inspector take corrective action.

A brake system deficiency would not be recorded on a track inspection report. It would be included in a separate report if the inspector felt it was of sufficient magnitude.

SENATOR LAUTENBERG: Why is it necessary that an employee's name be recorded on a safety violation report?

ANSWER: The employee's name is recorded on those violation reports where the employee's actions or failure to act is the basis for the violation.

SENATOR LAUTENBERG: Does the FRA protect the whistle blower? If so, how?

ANSWER: A complainant's name is never used in a violation report, nor is it ever reported to the carrier without the employee's consent. Every possible effort is made to prevent a carrier from learning the name of a complainant.

SENATOR LAUTENBERG: Have employees been written-up or disciplined after reporting violations? Have you investigated cases to determine whether a disciplinary action was retribution for reporting a violation?

ANSWER: It would be extremely difficult to determine whether disciplinary action was taken for a rules violation as a punishment for the earlier reporting of a safety violation. Section 212 of the Federal Railroad Safety Act of 1970 proscribes railroad retaliation against employees who provide such information and provides that such cases are to be resolved in accordance with procedures in the Railway Labor Act.

FRA's longstanding policy is never to release the names of complainants to the railroads. Most violations reported by employees can be established through documents, railroad admissions, or federal inspector observations. Only when none of these is available does FRA rely on third-party witness statements. In our experience, many railroad employees are willing to serve as witnesses despite any risk of retaliation. No pressure is placed on an employee to sign a statement. Of course, no penalty can be assessed where an employee declines to sign a statement, for in such a case the claim must be dropped for lack of evidence.

CONFLICT OF INTEREST - NEED FOR COMMISSION

SENATOR LAUTENBERG: Do you believe that there exists a conflict of interest, with the FRA being with a promoter of the railroad industry and at the same time the regulator of the industry?

ANSWER: It's difficult to see how that conflict of interest could arise.

FRA has multiple responsibilities as a safety regulator and enforcer, the owner of two federally owned railroads, a research and development agency, and administrator of various funding grants. Because we recognize that the economic health of the railroad industry bears a direct relationship to its safety performance (as the improvement in safety post-Staggers illustrates), FRA does promote the use of railroads by the shipping community.

How that promotion could create a conflict with safety enforcement is difficult to see. To begin with, safety is a significant selling point for every mode of transportation. Passengers and shippers of freight favor modes with better safety records, with lower loss ratios. Improved safety is absolutely consistent with, and an important part of, industry promotion. Moreover, there is no relationship between actions promoting the industry as a viable option for shippers and decisions that have to be made on individual regulatory matters. The individuals who perform the day-to-day safety functions at FRA are involved only in safety, and safety has always taken precedence over all other activities, given its standing as the agency's basic mission. There is simply no action the agency has taken or could reasonably take, in the promotion of railroads as a competitive transportation mode, that would conflict with safety decision-making. If anything, the successful promotion of railroads to the shipping community enhances safety by increasing the industry's cash flows, and making additional safety investments possible.

SENATOR LAUTENBERG: The distinguished Majority Leader, and valued member of this subcommittee Senator Byrd included in the 1987 continuing resolution an amendment establishing an "Aviation Safety Commission".

One of the reasons that Commission was called for centered on whether an agency with the dual responsibilities of promoting the commercial interests of an industry and ensuring safety could effectively perform the safety job.

I think FRA may be in an analogous situation. Would you support establishing a similar Commission on rail safety?

ANSWER: No. I believe the record is clear with respect to the effectiveness of FRA's performance of its safety job. Any agency that has cut the accident rate in it's industry in half a

decade is by definition performing it's safety function effectively. Moreover, the agency's safety performance is constantly under review by the GAO, the DOT IG, Congressional committees, and other interested groups such as the Office of Technology Assessment and the DOT Secretary's Safety Task Force. None of these groups suggested that FRA suffers from a conflict of interest, and there is no evidence to support that notion. We do not need another commission.

SENATOR LAUTENBERG: Another issue that the commission was to study was whether it is feasible to make mandatory some or all of the safety recommendations issued by the National Transportation Safety Board. Have you ever studied or estimated the feasibility of constituting all of NTSB's safety commendation?

ANSWER: The roles of FRA and NTSB differ. NTSB recommendations identify issue areas, but do not provide solutions to those identified problems. FRA must devise the necessary solutions, weigh the relative merit, and assess their cost benefit impact. As Chairman Burnett stated at our recent Communications Inquiry, "... that's one of the things the NTSB [does], we're glad to serve up problems and say here, solve them. I'm sure you recognize this tendency on our part. And because we do not have the resources, we're not regulators, and we do not have the experience in doing that." Since NTSB recommendations commonly come in the form of issue identification rather than specific solution recommendations, there is a practical obstacle to mandating their recommendations. If NTSB were given regulatory authority, I suspect it would act precisely as FRA does today.

Over the years many NTSB recommendations have been adopted, in whole or in part. Others have not been implemented for various reasons, including reconsideration and withdrawal of the recommendation by the Board. Several recent examples are illustrative. The NTSB recommended three things related to alcohol and drugs, (prohibition, post-accident testing and improved reporting). FRA found that additional measures were needed and added reasonable cause testing, pre-employment drug screens and identification of the troubled employee provisions.

In 1986 the NTSB recommended that FRA require the railroads to replace all bearings manufactured by Brenco Incorporated during the years 1978 through 1980 and in use on hazardous materials cars. After being provided with information related to the small number of accidents attributed to Brenco bearings and the cost, the Board closed the recommendation after "reconsideration."

Most recently, the NTSB reiterated a recommendation to require a backup system for mainline freight trains that will insure that a train is controlled by the signal system in the event the engineer fails to do so. FRA concluded the cost of this one recommendation would be $13.8 billion -- approaching the net worth of the nation's mainline railroads.

The FRA has a system to evaluate NTSB recommendations. A benefit/cost analysis occurs after a preliminary feasibility review. In many cases it can be concluded that the recommendation is not feasible before taking this step. My guess is that if all NTSB recommendations were automatically adopted there would not be a rail system. The present scheme where NTSB issues the recommendations and FRA performs the evaluation works. I believe some consideration of benefit/cost by the NTSB before issuing certain recommendations would make the process more efficient.

SENATOR LAUTENBERG: I know that you staunchly support the Staggers Rail Act which economically deregulated the industry, but I am concerned that along with economic deregulation we have also seen safety deregulation. Do you care to comment?

ANSWER: There is no connection between the two. We have not relinquished any areas of our authority and do not intend to do so. Over the past 3 years, FRA has commenced and concluded major regulation proceedings than during any similar period in its history. We greatly expanded the protection afforded hazardous materials in the event of an accident by requiring the industry to retrofit more than 3,000 cars with increased thermal protection, head shields and couplers designed to protect the contents from exploding or escaping into the atmosphere. We have attempted to stay at the forefront of new safety-related technologies by allowing for the use of radio telemetry devices which constantly monitor the brake pipe pressure and display that information on the locomotive cab, so that an engineer knows when he has brake problems before he tries to stop.

We broke new regulatory ground with our rule to control the use of alcohol and other drugs in the rail industry, the first and still the strongest of any similar Federal rule imposed on a regulated industry. We have begun our investigation into the area of railroad communications, and will soon be closely examining the issue of locomotive cab safety. If the information developed in these two areas justifies regulatory actions within our authority, we will aggressively pursue the appropriate action.

While continuing to actively pursue these and other substantive safety goals, we have also sought to reduce the regulatory burden on the industry where it is not productive. We have sought to reduce the paperwork associated with our rules wherever possible, and have specifically examined areas where regulatory requirements for small rail carriers could be reduced because the burden imposed by regulation is disproportionate to the benefits produced.

The number of FRA inspectors is at an all time high, and the number of on site inspections has increased in irtually every category since the Staggers Act became law, the industry's accident rate has also been cut in half-and that's the ultimate test of the effectiveness of my safety program.

SENATOR LAUTENBERG: In your "Harriman Awards" speech last year you attributed the progress in safety statistics to the economic deregulation of the industry. This implies the FRA program may have only a marginal, if any, influence on safety. Could you clarify your statements on this?

ANSWER: That is a distortion of the comments made during the Harriman Luncheon.

The Administrator's speech gave the Staggers Act primary credit for the improvement in accident ratios. The Staggers Act gave the industry the cash flow it needed to catch up on deferred maintenance, and invest in modern safety and efficiency producing technologies. It gave the industry the capacity to respond to FRA safety directives.

But the Administrator also said, and we quote, "The improvement in railroad accident statistics clearly reflects a real commitment to safe operations by the Nation's railroad companies. It's a commitment backed up every day with investments of dollars and manpower.

It reflects a tradition of leadership on safety issues from railway labor.

I also believe -- perhaps selfishly -- that it reflects increasingly effective leadership by safety officials at the State and Federal levels. The Federal Railroad Administration has concluded more regulatory -- and in some cases, deregulatory -- proceedings in the past two and one-half years than in any similar period in the history of the agency. Our inspection force, and the number of on-site inspections, are both at an all time high. And the results reflect it. While there are many examples, none makes the point more effectively than the improvement we've experienced in the transport of hazardous materials.

In 1980, there were 119 accidents that resulted in hazardous material release, and 34 that resulted in evacuation. During that era, FRA initiated a three-step rulemaking process to improve tank car safety by requiring shelf couplers, head puncture protection, fire protection, and increased relief valve capacity. The Association of American Railroads and the Railway Progress Institute estimate that these safety improvements have resulted in a 68 percent reduction in fire-related tank car failures and an 81 percent reduction in impact failures. The result -- the number of accidents with releases was cut in half in just four years."

RAIL SAFETY - RAIL SAFETY RECOMMENDATIONS

SENATOR LAUTENBERG: If you were limited to making three recommendations for improving rail safety, what would they be?

ANSWER:

1. Extend the Secretary's authority to assess civil penalties for violations of the railroad safety laws against railroads to include individual railroad employees.
2. Increase the maximum civil penalties permitted under the Federal Railroad Safety Act of 1970.
3. A legislative mandate for random drug testing and employee rehabilitation opportunities for employees with safety - sensitive responsibilities, as determined by the Secretary.

SAFETY PROCEDURES AND EQUIPMENT - COMPLIANCE

SENATOR LAUTENBERG: First, the warning whistle and cab lights on the Conrail locomotive had been partially disabled. You also indicate in your statement that tampering with safety devices is a widespread problem including both deadman controls and automatic train controls.

ANSWER: FRA has occasionally found locomotives which have the air-operated alarm whistle muffled in some manner, most usually by encasing it in a piece of cloth in order to be less annoying when activated. Some carriers have installed a safety device called the deadman pedal where the pedal must be held depressed by the engineers foot whenever the locomotive brakes are released. When the foot pedal is released, air will escape through the air whistle, and if not depressed within approximately one minute, the brakes will be applied from a penalty application and the locomotive power will go off. This device can be very easily nullified by placing any weight on the foot pedal or wedging it down with a flag stick or spare air hose.

SENATOR LAUTENBERG: Federal regulations require that trains be inspected before they leave the yard. What exactly is required?

ANSWER: Federal regulations mandate that trains must be inspected to comply with several sets of standards. The Freight Car Safety Standards, 49 CFR Part 215 require that all railroads have a qualified employee perform a predeparture inspection of all freight cars placed in a train. On line of road, cars placed in a train are required to be inspected by the train crew. The Railroad Power Brake Regulations, 49 CFR Part 232, require the railroad to perform initial terminal train air brake tests and inspections prior to departure. The regulation also requires other kinds of train brake tests that are determined by the type of train service and location.

The Railroad Safety Appliance Standards, 49 CFR Part 231, require that all freight cars, passenger cars and locomotives are properly equipped with the required safety appliances, automatic couplers and power brakes. The regulation requires that the safety appliance be in proper condition for use and when found defective to be promptly repaired.

The Locomotive Safety Standards, 49 CFR Part 229, require that all locomotives in service be in compliance and properly inspected and free of Federal defects. The inspections must be performed every calendar day of use. When locomotives are dispatched from engine terminals where mechanical department personnel are on-duty, they normally perform the inspections. At other locations, the railroad will designate the qualified person to perform the inspection.

SENATOR LAUTENBERG: Who inspects the locomotive before it leaves the yard?

ANSWER: The FRA regulations require that each locomotive, when used, must be inspected once every calendar day by an employee qualified to perform the inspections. If the locomotive is dispatched from an engine terminal or used in a yard complex where locomotive maintenance personnel are on-duty, they normally perform the calendar day inspection. In other situations, it is usually the engineer assigned to the locomotive.

SENATOR LAUTENBERG: Can anyone inspect the locomotive? That is, what are the qualifications of the personnel that inspect the locomotive?

ANSWER: The inspection must be performed by an employee qualified by training or experienced. Locomotive maintenance personnel are qualified by virtue of their training and work experience and locomotive engineers, who perform the majority of inspections at outpost points and small yards, have the experience and exposure to adequately inspect locomotives and discern serious defects.

There is virtually no indication in past accident investigations of deficiency in locomotive inspections, as use of employees unqualified to perform them. This has not appeared as a causative factor in accidents, and we have no reason to believe that these inspections are not being adequately performed.

SENATOR LAUTENBERG: Who "Walks the train" to make sure all cars are coupled and all the brake systems work?

ANSWER: The person or persons qualified by training or experience to perform the train air brake test normally walk the train to ascertain that all cars are coupled and the brakes apply and release. This will usually be car inspectors where mechanical forces are available; otherwise it will be a member of the train crew.

SENATOR LAUTENBERG: Who usually checks the cab signals?

ANSWER: A departure test of the cab signals is required at the initial terminal of a train or, if the cab signal is cut out en route, immediately prior to entering equipped territory. The engineer is responsible for performance of the test. If the test is made by an employee other than the engineer, the engineer must be informed and a written record made and kept thereof.

The engineer on the Conrail train involved in the Chase, Maryland accident stated that he tested the train's cab signals at the initial terminal, Bayview Yard, Maryland.

The cab signals and train control of the Amtrak train involved in the accident were tested by an electrician at

Union Station in Washington, DC and a record of the test was placed in the locomotive to inform the engineer.

SENATOR LAUTENBERG: How often are cab signals, speedometers, radios and other equipment checked.

ANSWER: Cab signals are subjected to comprehensive inspections and operating characteristics tests every 92 days.

In addition, daily or after trip test is required either once every 24 hours or within 24 hours before departure into equipped territory. The daily or after trip test consists of a visual inspection for damage to the apparatus and cycling of the device.

A departure test is required either on departure of the locomotive from its initial terminal or, if the device is cut out en route, prior to entering equipped territory. The departure test is to assure the engineer that the cab signals are functioning as intended.

Speed indicators are required on each controlling locomotive that operates at speeds in excess of 20 mph. The engineer is required to test the speed indicator over a speed test section (several measured miles) as soon as possible after departure from the initial terminal.

When a radio is provided for train operation outside yard limits, it must be tested at the point where the train is originally made up. The engineer and conductor are responsible for testing the radio. The test is required to consist of an exchange of voice transmissions with another station to determine the quality and readability of the radio's transmission.

SENATOR LAUTENBERG: How does FRA assure that the required pre-departure inspections are actually carried out?

Do you require a standardized checklist of all carriers?

Do you require certifications that the inspections are actually carried out each time a train is dispatched?

ANSWER: FRA's signal and train control inspectors make inspections at points where cab signal equipped locomotives are tested. Such inspections include review of the carriers' FRA required records of results of tests, observations of employees making tests and inspection and testing of equipped locomotives to determine that the cab signals function as intended and that repairs and adjustments are promptly made. Periodically, FRA inspectors ride equipped locomotives and observe the engineers' performance.

We have seen no evidence in past accidents of failure to test. Engineers are well aware of the predeparture testing procedue, Moreover, a checklist will not ensure performance of a test; an engineer reckless enough to ignore predeparture testing will simply check the list. The responsible engineer does not need the list.

FRA does require that records of the results of periodic tests and daily or after trip tests be kept. A record of the departure test is also required if the test is made by an employee other than the engineer.

SENATOR LAUTENBERG: Are the carriers required to retain these certification documents for later inspection?

ANSWER: While they are not required to do so, it is uniform practice in the industy for carriers to retain the records for a period of time. These are used by the FRA inspector when investigating complaints and doing violation work.

SENATOR LAUTENBERG: What recourse does an engineer have if a locomotive doesn't have a slip certifying that all systems/equipment work?

ANSWER: If the locomotive does not have an in-date 92-day periodic inspection report in the locomotive cab or if he discovers a noncomplying condition on the locomotive, the engineer will report the condition to the yardmaster, trainmaster or dispatcher for their handling. The carrier is obligated by Federal regulation to bring the locomotive into compliance before it can be used.

SENATOR LAUTENBERG: Can an engineer refuse to leave the yard until all defects are corrected?

ANSWER: FRA advises engineers or train crewmembers that they may take a stand on a noncomplying condition or situation when they bring it to the carriers attention and refuse to go.

SENATOR LAUTENBERG: Does FRA have safety standards for locomotive cabs or other rolling equipment?

ANSWER: Yes, safety standards for locomotive cabs, found in 49 CFR Part 229.119,deal with adequate and safe seats, cab windows, floors, heating and ventilation systems and containers to hold warning devices. Safety standards for freight cars, found in 49 CFR Part 215, deal with such items as wheels, springs, truck, car doors, draft gears and car bodies.

SENATOR LAUTENBERG: Does the FRA require "automatic" braking on either passenger or freight trains?

ANSWER: FRA requires that where trains are operated at speeds of 80 or more miles per hour each locomotive from which the brakes are controlled be equipped with automatic cab signals, automatic trainstop, or automatic train control. It is the prerogative of each carrier whether automatic braking (automatic trainstop or automatic train control) is provided when cab signals are used.

SENATOR LAUTENBERG: What railroads have automatic braking equipment?

ANSWER:

Railroad	Type of Equipment
Atchison, Topeka and Santa Fe	Automatic trainstop (passenger trains only)
Chicago and North Western	Automatic trainstop Automatic train control (separate lines)
Chicago Central and Pacific	Automatic trainstop
Illinois Central Gulf	Automatic trainstop
Long Island	Automatic train control
Metro North Commuter Railroad	Automatic trainstop Automatic train control
National Railroad Passenger Corporation	Automatic train control
New Jersey Transit	Automatic trainstop Automatic train control
Northeast Illinois Railroad	Automatic train control
Port Authority Trans Hudson	Automatic trainstop

Richmond, Fredericksburg and Potomac	Automatic train control
SEPTA	Automatic trainstop
Union Pacific	Automatic trainstop

SENATOR LAUTENBERG: Do passenger and freight trains in Europe have automatic braking equipment?

ANSWER: Certain railroad lines in Europe do have automatic braking equipment for passenger and freight trains, but not all lines.

SENATOR LAUTENBERG: One of the arguments against automatic trainstops in that throwing a train into "Emergency" causes derailment. Why does this have to be the case? That is, doesn't technology exist to develop a graduated braking system that could stop a train without derailment?

ANSWER: The brake application of an automatic trainstop device or automatic train control device is required to be at the service rate until maximum brake cylinder pressure is developed. Emergency application is prohibited. The service rate develops a more gradual application of the brakes than does an emergency brake application.

Each freight car has movement in its draft gear of up to one foot, commonly referred to as slack. Thus, a 100-car train may have up to 100 feet slack. When that train is stretched (in draft) as when ascending a long grade, it will be 100 feet longer than where the cars are bunched together (in buff) on a long descending grade. When such a train moves over a crest, part of the train is in draft on the ascending grade and part of the train is in buff on the descending grade. Such a train may be on several ascending and descending grades at the same time causing the slack action to be constantly changing the length of the train. An important element of a locomotive engineer's skill is knowing the behavior of the slack action in his train at all times.

As the slack runs out in draft, forces can be developed that will cause draft gear to be destroyed, separating the train and causing the brakes to be applied in emergency (this raises the possibility of derailment). As the slack runs in in buff, forces can be developed that will cause cars to jackknife and derail. These forces are developed by the weight of the freight cars depending on the movement permitted by the slack action. A skilled engineer operates his train in a manner that avoids excessive draft and buff forces. However, during critical moments an undesired brake application can be disastrous to even the most skilled engineer. With automatic train control, the requirement that the engineer apply the brakes during a critical moment or suffer an imposed brake application as an alternative, could cause excessive buff forces that would derail his train.

FRA has conducted a study that, theoretically, shows less than a full service brake application with automatic train control would not result in excessive buff forces in a freight train and would safely stop the train without derailment. This concept has not yet been actually tested using automatic train control equipped locomotives. Actual testing would also have to consider spacing of roadway signals to assure braking distances are adequate under all circumstances.

SENATOR LAUTENBERG: The NTSB recommended that automatic train control devices be required on all trains operating in the corridor in 1978. Why wasn't this adopted then?

ANSWER: The NTSB recommendation was directed to Amtrak. Subsequently, Amtrak took action deemed sufficient by NTSB to close the recommendation as "Closed - Acceptable Alternate Action." On this basis there was no direct FRA involvement in the recommendation.

In June 1979 Amtrak sought FRA approval of a proposal in block signal application No. 1588 that, among other things, would have required automatic train control devices on all locomotives operating in the corridor. The application was opposed by Conrail, Providence and Worcester, Boston and Maine, Massachusetts Bay Transportation Authority, SEPTA, Brotherhood of Railroad Signalmen, Brotherhood of Locomotive Engineers, and the United Transportation Union. FRA conditionally approved the application in December 1980.

In November 1982, Amtrak withdrew BS-Ap-No. 1588 because budget restraints precluded its implementation.

SENATOR LAUTENBERG: It is the committee's understanding that FRA is having a hearing on train radios at the end of the month. Based on what you know today, what part did the radio communications play in this accident?

ANSWER: Given the fact that the accident occurred in territory controlled by wayside signals and not by radio voice communications, there is no evidence to suggest that the radio, or lack thereof, played any direct role in the accident. In addition, since the accident occurred in a populated area with several homes nearby, the emergency response was not delayed by the fact the Amtrak cab radio was inaccessible. Records show that the first emergency call was received almost immediately after the accident.

SENATOR LAUTENBERG: Does FRA presently require all locomotives to be equipped with operable radios?

ANSWER: No current FRA regulations do not require all locomotives, or even all trains, to be equipped with radios. FRA rules govern the use of radios (require them to be in operating condition) when they are available, but do not mandate their availability.

SENATOR LAUTENBERG: Following this accident the NTSB on January 15, 1987, recommended a number of regulations and requirements regarding radios. Are there Federal requirements covering inter and intra-train communications?

ANSWER: At present FRA does not require the capability of either inter or intra-train communications. In the event that these communications are to be carried out with the use of radio, however, FRA rules do cover the procedures to be used. This is obviously a central issue in the current rulemaking.

SENATOR LAUTENBERG: Are there Federal rules covering radio usage for dispatching and controlling operations?

ANSWER: Yes, FRA radio use regulations specifically deal with the use of radio in the dispatching and control of operations in CFR Part 220.61 governing the transmission of train orders by radio. The term "train order" is defined as, "...any mandatory directive issued as authority for the conduct of a railroad operation which is transmitted by radio."

When train orders are transmitted by radio, FRA rules require very specific procedures by both the sender and receiver of the message. The train order must be copied down by the train operator, sometimes necessitating the stopping of the train by FRA rules. The order must be repeated and verified. Before the order is acted upon, both the conductor and engineer must have written copies, and they must be read and understood by all members of the crew. A train order not fully completed, or which does not comply with the operating rules, may not be acted upon and must be treated as if it was not sent. In addition, no one other than the addressee of the orders, such as another train overhearing, may act upon those train orders.

SENATOR LAUTENBERG: Are there standards on the use of radio frequencies?

ANSWER: Yes, there are standards set by the Federal Communications Commission. The Association of American Railroads, acting as the designated agent of the FCC, monitors and allocates frequencies in the railroad radio spectrum for use by the rail industry.

SENATOR LAUTENBERG: Are the existing standards adequate?

ANSWER: While not expert in this area, it is our view that the standards themselves appear to be adequate.

SENATOR LAUTENBERG: Do you favor the January 15, 1987, NTSB recommendations regarding radios?

ANSWER: That is a central issue in the ongoing communications rulemaking, and we cannot comment on the substantive issues raised in the rulemaking during the open docket period.

STATE SAFETY GRANTS-IN-AID

SENATOR LAUTENBERG: The FRA has repeatedly requested zero funding for the State Safety Inspection Program. Do you believe that this is a valuable program to augment Federal inspections?

ANSWER: We believe the state inspectors play a valuable role, although it is limited by their jurisdictional limitations.

We do not believe the states would terminate involvement if Federal cost-sharing ceased. However, it is no longer an issue because FRA has requested $1.35 million for the Grants-in-Aid for Railroad Safety program for FY 1988. This is the same funding level as FY 1987 and 27 of the currently participating states have already submitted grant requests to FRA. These 27 states employ 95 of the 104 state inspectors now in the program. The remaining four states have not indicated that they plan to terminate involvement.

If $1.35 million of Federal funding will keep the level of state participation intact, it is a worthwhile expenditure and should be continued into FY 1988.

SENATOR LAUTENBERG: Have you ever conducted an analysis as to the effectiveness of the State inspector program versus the Federal inspector program. If so, what were the results? If not, why not?

ANSWER: We have only been able to do a limited comparison between Federal and State inspectors in the past, since we do not have all of the factors traditionally used when making productivity measurement comparisons. The most notable limitations are time spent to accomplish each task and adjustment factors to account for differences in the scope of duties covered while conducting an inspection. For example, Federal inspectors have historically had much more contact with railroads and have participated in extensive assessments which require more inspection time. Because of their territorial limitations, state inspectors can rarely participate in asessments. We believe these extra duties of Federal inspectors significantly add to the quality of an inspection completed even though the total output measured in numbers of inspections or inspected items may be less.

To resolve this measurement shortcoming, FRA began a program in January 1987 to measure Federal inspector productivity using time to complete a task as a major ingredient.

Results from the latest comparison without time measurement are:

STATE VS. FEDERAL INSPECTOR PRODUCTIVITY

	Calendar year 1985	
	State	Federal
Track miles inspected per inspector	3,031	2,917
Track exceptions recorded per inspector	841	743
Track violation reports per inspector	0.48	1.61
Defective freight car units reported as percentage of cars inspected	3.68	3.53
Equipment violations reports per inspector	15.36	28.53

CONRAIL OPERATIONS ON THE CORRIDOR

SENATOR LAUTENBERG: One issue that the Colonial tragedy has underscored is the mixed use of the Corridor by both freight and passenger service. As catastrophic as the accident was there are perhaps even greater hazards. I am very concerned about derailments when an Amtrak train traveling over 100 miles per hour, passes a freight train traveling 40-50 miles per hour on an adjacent track, or passes between two freight trains moving in opposite directions. A derailment at that time would result in certain disaster. Would you favor the limiting of through freight trains to the hours of 10:00 p.m. to 6:00 a.m. the following morning?

ANSWER: That type of rescheduling should be pursued to the maximum extent feasible. While there are cost repercussions in the freight distribution system and in Amtrak itself, we support efforts by Amtrak and Corridor freight carriers to reach agreements on rescheduling freight trains.

SENATOR LAUTENBERG: We have been told that the original plan for the Northeast Corridor called for the separation of freight and passenger service. Amtrak and other parties continue to advocate removal of freight from passenger trackage in the Corridor. Has FRA done an analysis on this issue? What are your conclusions? Does freight service on the Corridor pose a significant safety hazard in your judgment? Would dedicated, well separated rail lines for freight and passenger service be feasible? Would restricting freight operations to off-hours be workable?

ANSWER: As recently as November 1986, FRA submitted to the Congress a comprehensive report summarizing options for diverting freight traffic from the Northeast Corridor. Similar reports had been published by this Agency and the United States Railway Association (USRA) in the mid-1970's and early 1980's. Freight diversion is an extremely complex issue. For costs ranging from $23 to $344 million, systems can be constructed by Conrail and connecting railroads to shift from 26 to 100 percent of freight traffic to other lines. But these figures do not include additional operating costs for Conrail, such as added trackage rights fees, nor do they measure the impact of added circuity on Conrail's operations. Large scale diversion would also increase grade crossing hazards, for it would shift freight traffic from the most modern rail Corridor in the nation, with the state-of-the-art safety devices and without grade crossings, to a line with more than 60 grade crossings and conventional safety systems. Full diversion would, in addition, deprive Amtrak of more than $25 million in revenues. Full diversion would also eliminate service to some shippers now on the Corridor.

The various reports recommending freight diversion have done so principally for reasons of efficiency and improved maintenance capacity, with safety a secondary objective. There is nothing inherently unsafe about shared passenger/freight operations. Amtrak shares every mile of its 23,500-mile system with freight operations, as American passenger trains have done for more than 100 years. Nor is there anything in this accident unique to freight operations. A signal that fails does not distinguish between passenger and freight, and a crew that misreads or ignores a signal in a freight locomotive is just as likely to do so in a passenger cab. Only in the extremely rare case of a shifting load or overhanging freight on parallel track operations, is there any accident exposure unique to shared trackage.

Of course, the exposure to accident potential is in direct relation to volume, and by lowering volumes on the Corridor, diversion would reduce safety exposure to at least some extent. This is not an issue that can be addressed through regulation. Conrail's right to run on the Corridor is a property right, resulting from an easement retained in the transfer of the Corridor to Amtrak. To eliminate Conrail's right to operate on the Corridor, that easement would have to be condemned, and compensation to Conrail provided.

SENATOR LAUTENBERG: What special precautions do Federal regulations require with respect to hazardous cargo?

ANSWER: The containers used for hazardous cargo must meet specific design criteria.

Trains carrying hazardous materials must have shipping papers that describe the hazardous cargo.

Railcars carrying hazardous materials must have placards and markings that describe the hazardous cargo.

Containers used for hazardous materials must have sufficient outage to allow for the expansion of the hazardous material.

Rail carriers are required to instruct their employees regarding the hazardous materials regulation.

Loaded placarded tank cars must be inspected by the carrier before acceptance at originating point and when received in interchange to see that it is not leaking and that the brakes, journal boxes, and trucks are in proper condition.

A carrier must forward each shipment of hazardous materials promptly.

Since 1980 FRA has required certain tank cars hauling flammable gases, anhydrous ammonia and ethylene oxide to be equipped with head shields, thermal insulation and/or large capacity safety valves. In addition, all tank cars carrying hazardous materials must be equipped with vertical restraint couplers (effective March 1, 1985).

FRA is continuing, through its Office of Research and Development, to study the need for any additional equipment protection.

SENATOR LAUTENBERG: Are freight trains more prone to derailments than passenger trains?

ANSWER: Based on the latest FRA accidents/incidents information covering January 1986 through October 1986, Amtrak passenger trains experienced 1.89 accidents per million train miles traveled. For the same period of time, the average accident rate for the eleven major rail freight carriers was 4.65 accidents per million train miles. These figures indicate that freight trains experience about 2 1/2 times the number of accidents as Amtrak passenger trains for the same period of time and equivalent miles traveled. However, given the fact that accident exposure increases proportionally with volume (and freight volume is much higher than passenger), and given the fact that passenger trains do not experience the slack action problems faced by freight trains and run only on the most modern track, we doubt that there is any significance to the difference in numbers.

SENATOR LAUTENBERG: Do freight trains have a greater incidence of serious mechanical malfunctions than passenger cars?

ANSWER: Based on the latest FRA accidents/incidents information covering January 1986 through October 1986, Amtrak equipment defects caused .54 accidents per million train miles traveled. For the same period of time, the average accident rate due to equipment defects for the eleven major rail freight carriers was .78 accidents per million train miles traveled. Again, however, given the differing nature of freight and passenger operations as detailed in the answer to a previous question, there is probably no significance to this difference.

NTSB RECOMMENDATIONS ON TRAIN CONTROL

SENATOR LAUTENBERG: Do you favor the Board's recommendations?

- On January 15, the National Transportation Board issued three recommendations:

(1) That all locomotives operating on the high speed trackage of the Northeast Corridor be equipped with automatic train control devices.

(2) That, in the interim, trains lacking automatic train control be required to stop before entry onto higher speed tracks regardless of signal indication and to request and receive permission before proceeding; and

(3) That all locomotives allowed to operate on the high speed trackage be required to have an operable radio capable of train-to-train and train to station communications.

ANSWER: (1) Between 1977 and 1983, both FRA and the National Transportation Safety Board considered recommending that freight and commuter trains operating on the Corridor be equipped with receiver units that would enable them to utilize the automatic train control transmission structure incorporated in the Northeast Corridor roadbeds. For a variety of reasons, both agencies drew back from those recommendations. I believe that issue needs to be re-examined, and we will review it -- and take whatever action proves necessary -- in the year ahead.

(2) There is no justification for requiring trains lacking automatic train control to stop; and request permission before proceeding onto the high speed tracks. There is no logical reason to require such a train to come to a stop if the train, under the control of an engineer who is in full possession of his faculties, is being handled in accordance with the signal indications. If the engineer is incapacitated in some manner, there is no basis to believe that he would be more likely to obey an operating rule requiring a stop than to obey a signal indication requiring a stop. The requirement that such trains stop before diverging from a 110-mph track to a 125-mph track through a signal protected turnout would unnecessarily delay traffic and could lead to unsafe practices, ultimately resulting in an accident or incident.

(3) FRA is now in the open docket period on a comprehensive safety regulatory proceeding governing radio usage in the railroad industry.

SENATOR LAUTENBERG: Does FRA have the authority to require Amtrak to adopt them?

ANSWER: Yes. Under the authority of the Signal Inspection Act and the Railroad Safety Act of 1970, FRA could require Amtrak to adopt the recommendations if found necessary in the public interest and the cost impact was effective.

SENATOR LAUTENBERG: Do you intend to do so?

ANSWER: This question was answered as part of FRA's response to a preceeding question.

SENATOR LAUTENBERG: What would it cost to install automatic train controls on all locomotives operating on the NEC?

ANSWER: From $27 to $42 million, based on unit costs developed in 1980 and adjusted for inflation. Since both Conrail and some of the commuter operators provide service on the Corridor as well as on off-Corridor lines with the same fleet of locomotives or power cars, any cost estimate would depend on the extent to which locomotives and power cars could be segregated into those vehicles using the Corridor and those not allowed on the Corridor.

If "electronic gates" are installed to turn the ATC on and off at entry/exit points, about $5 million more would be needed. The use of such gates would make it unnecessary to provide the abiity to turn ATC on and off easily by hand, thus reducing opportunities for unauthorized disabling of the ATC device.

We are working at updating and firming up these preliminary estimates, and will supply you with more complete information as soon as it is available.

See table for details.

Costs of Adding Automatic Train Control (ATC)
to Non-Amtrak Equipment on NEC Spine 1/

Owner	Locos. & Cars to be equipped	Costs ($ Millions)	Remarks
MARC	0	0	4 electric locomotives and 4 cab cars are already equipped with ATC for NEC. Additional locomotives and cars operate on CSXT, and don't need cab signals.
SEPTA	311 2/	11.65	Additional cars are now being replaced by 17 new units which will be equipped with ATC.
NJT	204-384 3/	7.7-10.7	10 electric locomotives, 44 diesels, and 36 cab cars already equipped with ATC now operate on NEC. 34 diesels and 180 to 350 MU cars need to be equipped with ATC.
MNCR & LIRR	33	1.32	135 locomotives and 1406 cars already equipped with ATC. Most are confined to LIRR, Hudson, and Harlem. 33 diesels and RDC cars need to be equipped with ATC.
MBTA	0	0	All locomotives and cars operating on NEC are already equipped with ATC. Additional units confined to North Station service do not require ATC.
P&W (freight)	7	0.28	8 additional diesels never operate on Amtrak, and do not require ATC.
Guilford (freight)	14-45	0.56- 1.8	Total of 14 based on two round trips per day Potomac Yard-Binghamton with at least two units per train equipped with ATC. 45 assumed for efficient fleet utilization.
Conrail (freight)	124-400	4.96-16.0	124 based on Conrail trains currently operating over Conrail to or from closest terminal where train is switched and crews changed. 400 based on preliminary estimate to maintain efficient fleet utilization.
TOTAL	693-1180	$27 - 42	
Wayside Electronic Gates	50	5.0	Assume $100,000 each installed.
Grand Total		$32 to $47 million	

1/ Unit costs based on 1980 estimates adjusted for inflation. Costs include event recorders.

2/ Assumes entire fleet equipped in order to avoid segregation of NEC vs. non-NEC fleet because of joint operations.

3/ Range encompasses segregation of Corridor fleet vs. complete integration with other NJT service fleet.

SENATOR LAUTENBERG: My understanding is that automatic train control was standard equipment on Conrail locomotives until sometime in the late 1970's when the carrier replaced its electric engines with diesels with these devices. Did FRA approve of this change? Why?

ANSWER: The Washington to New York trackage was designated as automatic cab signal territory by the Interstate Commerce Commission (ICC) in 1931. The ICC had the responsibility of enforcing signal and train control regulations until FRA was formed in 1967. No other Federal Order changing the designation for this trackage has been effected since 1931.

In the early 1950's, the Pennsylvania Railroad (PRR), former owner of this trackage, made a management decision to add automtic train control devices to its passenger trains only. This management decision did not require ICC approval and has been continued by both Conrail and Amtrak.

In the early 1960's, the PRR purchased 66 electric locomotives having automatic train control for use in freight service exclusively confined to electrified territory. Diesel locomotives with automatic cab signals only continued to be used in the corridor for freight service to and from non-electrified lines. In 1981 Conrail retired the electric locomotives in favor of the more economical diesels. Since this is designated automatic cab signal territory, and since the diesel locomotives are equipped with cab signals, this decision did not require FRA approval.

SENATOR LAUTENBERG: NTSB recommended installation of automatic train control devices in 1978 after the Seabrook, Maryland accident. Why didn't FRA issue such a rule at that time? Do you agree that if such a rule had been in effect, the crash at Chase, Maryland would probably not have occurred?

ANSWER: This NTSB recommendation was directed to Amtrak. Subsequently, Amtrak took action deemed sufficient by NTSB to close the recommendation as "Closed-Acceptable Alternate Action." In other words, NTBS considered Amtrak's operating rules an effective alternative to ATC and withdrew it's recommendation. There was no FRA involvement.

It must be recognized that automatic train control is not a panacea for accidents such as occurred at Chase, Maryland. Post accident testing indicates that the Conrail locomotive entered Gunpow Interlocking while moving at about 19 mph with the brakes applied in emergency and subsequently stopped in the path of the oncoming Amtrak passenger train.

Automatic train control will enforce, where required, the maximum speed of 125 mph, limited speed of 45 mph, medium speed of 30 mph, and restricted speed of 20 mph. There is no enforcement below 20 mph.

Had the Conrail locomotive been equipped with with automatic train control, it would have been required to approach Gunpow Interlocking at a final speed of 20 mph. Had the engineer not applied the brake until just as the locomotive entered the interlocking, the locomotive would have stopped at approximately the same location. The accident probably would not have occurred because instead of continuing at 60-plus mph until the brakes were applied in emergency, the Conrail locomotive would have been required to reduce to 45 mph at the approach signal, almost two miles from the interlocking, and reduce to 20 mph, almost one mile from the interlocking. With this reduction in speed, the Amtrak train would have probably passed Gunpow Interlocking before the Conrail train entered the interlocking.

However, it must be pointed out that, given different time frames, an automatic train control equipped locomotive could be operated in such a manner that would result in the occurrence rather than the prevention of a similar accident.

RAILROAD RESEARCH AND DEVELOPMENT

SENATOR LAUTENBERG: What has FRA done in the area of improved safety in the locomotive cab environment? At last year's hearing for the record it was said that one of the major R&D efforts was in this area. What are the results of that effort?

ANSWER: FRA funded a number of research efforts during the period 1972 to 1982 investigating the locomotive cab environment and crashworthiness and developing design alternatives. During this period, FRA also participated as a member of the industry's Locomotive Control Compartment Committee. This Committee is composed of FRA, the Association of American Railroads (AAR), the Brotherhood of Locomotive Engineers (BLE), the United Transportation Union (UTU), and railroad representatives. Participation in Committee activities assured the results of studies and crash testing was disseminated to the railroad industry.

The results of those efforts encouraged the Burlington Northern Railroad to increase the crashworthiness of locomotives. Both locomotive builders now provide increased crash resistance in collision post and hood construction on six-axle locomotives. As a result of testing conducted at the Transportation Test Center, the FRA promulgated a glazing rule that provides safety standards for locomotive windows. Research studies also indicated the importance of providing anticlimbers on locomotives and we expect the major railroads to require anticlimbers on new locomotives.

On another aspect of locomotive safety, in 1975, the AAR adopted in its Manual of Standards requirements pertaining to "clean cab" design for road and road switcher type locomotives. Those requirements were adopted from cooperative Government-industry research directed toward reducing the possibility of crew injury in the event of an accident.

The funding requested in the Fiscal Year 1987 budget will be used to test the crashworthiness of more recent and differing locomotive designs. This project, in the planning stage, will concentrate on crew safety in both a grade crossing accident involving heavy truck equipment and slow speed rear end collision situations. No previous testing has been done to indicate the effectiveness of stronger collision posts in short hood locomotive construction. Consideration will also be given to the locomotive cab design changes necessary as a result of railroads operating without cabooses on many trains.

SENATOR LAUTENBERG: Did this research involve investigation of safety devices in the locomotive cab like cab signals, overspeed controls, automatic braking equipment, electronic alertness controls?

ANSWER: A research project was completed entitled "Evaluation of Signal/Control System Equipment and Technology." The project included seven tasks that reviewed signalling and train control equipment and made recommendations for standards. The final report was published in 1981. A project is now underway to develop a nonintrusive, low-cost, innovative engineer alerter system. The system is being developed under a small business contract. Prototype testing is scheduled to begin in the fall of 1987.

SENATOR LAUTENBERG: Should FRA require standardization of this type of equipment in terms of operation, maintenance and location?

ANSWER: These are issues which will be explored in depth during FRA's Locomotive Cab Safety Inquiry later this year. We have not pre-judged them.

SENATOR LAUTENBERG: An FRA spokesperson has stated that of 3,430 accidents in 1985, approximately 30 percent of railroad accidents are due to human error. Should FRA do more research in this "behavioral" area?

ANSWER: Human factors related research currently nearing completion explored and documented training techniques for locomotive engineers and the objective measurement of their performance. This work has been done using the Research and Locomotive Evaluator/Simulator (RALES). Projects are underway to develop aptitude tests for screening candidates for training as locomotive engineers and to demonstrate to management the use of motivational techniques to improve the effectiveness of railroad safety programs. Planned to begin in 1987 are projects to evaluate the human factors aspect of the train dispatching function and the effects of stress and fatigue on locomotive engineer performance.

NORTHEAST CORRIDOR IMPROVEMENT PROJECT

SENATOR LAUTENBERG: Since 1977, the Federal Government has invested over $2.3B in an effort to build a world class high speed passenger system in the Northeast Corridor. How do the safety devices and systems installed on the Northeast Corridor compare with other high speed passenger rail operations in Europe and Japan?

ANSWER: Safety devices on foreign high speed rail lines vary with the traffic mix and the local environmental conditions. If earthquakes, floods or rock slides are prevalent, as in Japan, then various types of detectors are connected into the signal system to stop trains and prevent disasters. Hot bearing, dragging equipment, and rock slide detectors are used extensively.

Operation of high speed trains virtually always requires the use of cab signals and some form of overspeed control. The number of cab signal aspects varies and is usually determined by the type and performance of the trains operating on the tracks. If there are only high speed passenger trains, like the Japanese Shinkansen, 5 or 6 cab aspects are used.

Where high speed trains share tracks with freight and commuter trains, as in France, Italy or Russia, the number of cab signal aspects ranges from 9 to 20. In at least 3 countries (Japan, France and Italy) the signal system includes an automatically enforced absolute stop cab signal aspect, which prevents a train from moving if an automatic stop signal is displayed unless released by a supervisory official. All trains operating on joint use tracks are normally required to be fully equipped to pick up the appropriate cab signals whose indication is automatically enforced if the operator does not take the appropriate action.

In Britain, where high speed train tracks are also used by freight and commuter trains, there is no speed control. However, all trains have a device which will stop the train if the engineer fails to initiate braking within a few seconds of a warning that a restrictive signal has been passed.

The Northeast Corridor is equipped with 4 cab signal aspects, of which the most restrictive permits operating at 20 mph. Amtrak locomotives are equipped with automatic train control to enforce the speed commands, but more than 700 commuter vehicles and all Conrail locomotives have no enforcement capability. A number of strategically located dragging equipment and hot bearing detectors have been installed along the Corridor and Amtrak is installing more. One high load detector is in use. Conrail has 2 open door detectors in service at Philadelphia.

SENATOR LAUTENBERG: The original Northeast Corridor Improvement Project included a number of specific safety-related projects for which funds have not been requested. Which of these investments would do the most to improve safety in the Northeast Corridor? How many bridges on the NEC are presently subject to slow orders? Would centralized traffic control north of Philadelphia make a material difference in the safety of operation?

ANSWER: Virtually all facets of the Northeast Corridor Improvement Project affect the safe movement of people and cargo. Certainly bridges and track structures must be sufficient to carry the static and dynamic forces of the various trains and the signal system must provide adequate stopping distances for all trains. In a similiar manner safety is a major consideration with respect to rolling stock, tunnels, electric traction, maintenance facilities and stations.

The NECIP was faced with decades of deferred maintenance, where safety was being maintained through slow orders and temporary improvements to various systems. Priorities had to be set starting with those safety critical items in the worst condition and working up towards those less critical items which could last longer before being fixed or replaced. Some items were not fixed or replaced by the NECIP, some were outside its scope. The system is very safe today, but like any system, could achieve marginal safety improvements with any number of progressive modernizations.

One such item would be to require the installation of automatic train control (ATC) on all vehicles using the Corridor in order to insure compliance with the instructions being given by the signal system. Such a requirement was at one time contemplated as part of the Northeast Corridor Improvement Project in conjunction with a plan for a new signal system designed for 180 mph operations. When implementation of the 180 mph plan was not funded, the ATC requirement was dropped.

Another item involves bridges which had been scheduled for rehabilitation or replacement. Slow orders will be imposed in order to reduce dynamic loads and maintain the same safety margin. There are currently 19 bridge-related slow orders listed in the employees timetable between Boston and Washington. These are listed below. An "*" indicates a rehabilitation project is underway.

Bridge Slow Orders

Mile Post	Bridge	State
227.8	Fort Point Channel	Massachusetts
60.7	*Devon (movable)	Connecticut
55.8	Peck (movable)	Connecticut
44.3	*Saga (movable)	Connecticut
41.3	*Walk (movable)	Connecticut
32.8	Mill River	Connecticut
29.9	*COB (movable)	Connecticut
26.8	Hamilton Ave.	Connecticut
26.1	Byram River	Connecticut
4.61	County Road	New Jersey
4.76	Conrail	New Jersey
4.95	Conrail	New Jersey
5.65	Conrail	New Jersey
6.1	*Portal (movable)	New Jersey
6.86	Conrail	New Jersey
7.85	*Conrail	New Jersey
7.96	*Conrail	New Jersey
26.23	Memorial Parkway	New Jersey

A third item is the signal system itself which was only partially renewed. The Northeast Corridor Improvement Project installed 75 new interlockings, 500 track miles of automatic block signals, and 500 miles of new signal cable. However, there are approximately 25 interlockings and 500 track miles of automatic block signals which date from 1910 to 1940 plus hundreds of miles of old paper insulated lead covered cable and open line wire which have outlived their design life. Note, however, that these signal systems are designed to "fail safe," e.g., the signals will display "stop" should a malfunction occur.

Extending CETC north of Wilmington would give Amtrak better and more immediate control of its operation.

Centralized traffic control (CTC) provides for the remote control of a large number of interlockings from one central point where a few people can see the location of trains and cleared routes over a large territory. The NECIP combined CTC with the remote control of the electric traction and signal power supply systems into what is called the centralized electrification and traffic control (CETC) system. A CETC center has been built in Philadelphia to control the Corridor from Washington to Wilmington, while another center is being built in Boston to control from Cranston, Rhode Island to Boston.

The purpose of CETC is primarily to improve the efficiency of train movement. While it cannot override any signal safety logic located in the field, it does enhance safety of train movements and maintenance personnel in a general way by displaying all available information at one place. It improves safety of maintenance activities by blocking exits from adjacent interlockings, blocking signals and/or de-energizing catenary and displaying these actions on one overview screen.

PASSENGER SAFETY

SENATOR LAUTENBERG: As a result of an Amtrak accident in Vermont in July 1984, the National Transportation Safety Board (NTSB) made a number of recommendations, including:

- Replacing existing mirrors with shatterproof material.
- Redesigning and modifying coach and seat back cushions to prevent their becoming dislodged; and
- Developing and installing effective retention devices on overhead luggage racks.

In the Chase, Maryland, accident did injuries occur as a result of certain deficiencies in the passenger car interior?

ANSWER: There were about 175 injuries reported as the result of the Chase, Maryland, accident. A determination of the precise cause of injuries is under further evaluation.

SENATOR LAUTENBERG: What actions have been taken by either FRA or Amtrak to respond to the NTSB recommendations on passenger safety?

ANSWER: FRA has worked with Amtrak over a period of years to redesign intercity passenger cars to improve their ability to survive impact accidents and derailments. As a consequence of those efforts, Amtrak vehicles are now equipped with crash posts, seats have been retrofitted with improved locking devices, and a prototype luggage restraint system designed especially for intercity passenger traffic has been developed.

This is the only true high speed accident Amtrak has experienced in this decade. We must respond to this tragedy by analyzing the impact of those design changes, and developing further refinements where necessary.

On the day after the accident, FRA inspectors photographed

the interiors of the surviving cars, and are translating those photographs into charts defining the effect of the impact on Amtrak's interior fixtures.

Preliminary counts on seat survivability are encouraging. Only nine of the 692 seats in the surviving cars appear to have separated from their moorings. That is an extraordinary result in a collision between an object moving at 105 m.p.h. and a stationary object. In the past, seat separation had been a problem in accidents at lower speeds. We have determined that approximately 15% of the seats rotated to some degree, and are attempting to determine how much of that occurred on impact, and how much is a consequence of rescue operations. We will evaluate the safety impact of those findings, if any.

Inspection of the post-accident vehicles has reinforced our standing concern about loose baggage. While baggage is rarely implicated in actual injuries, its presence in aisles and doorways is an obstacle to maximum efficiency in rescue operations. FRA has been working with Amtrak since last summer to develop prototype designs for a luggage restraint system adapted to the particular needs of railroad passengers. In-service testing is scheduled to begin in early February, and the data compiled from this accident should assist us in evaluating and, if necessary, refining the prototype design.

Finally, despite a retrofit by Amtrak to resecure the microwave ovens in its cafe cars, it appears two of these ovens came free from their moorings on impact. While they caused no known injuries, we are concerned about the potential for injury and will work with Amtrak to determine whether the microwaves in this train had received the retrofit, and if they had, to develop a more effective system.

SENATOR LAUTENBERG: Has an estimate been done on the costs for complying with these recommendations?

ANSWER: The FRA has not conducted a detailed or formal estimate on the costs for implementing these recommendations.

SENATOR LAUTENBERG: In addition to these recommendations, have you ever investigated equipping passenger trains with seat belts?

ANSWER: Continuous studies of passenger restraint or containment have been made. Generally, past studies have indicated the most effective means of minimizing injuries to seated rail passengers is to provide surfaces with energy absorbing characteristics such as padding to the back of the seats and bulkheads facing the passengers. However, we are continuously reevaluating this issue.

SENATOR LAUTENBERG: If not, does the Chase, Maryland, accident suggest that such studies be undertaken.

ANSWER: In addition, to the studies already conducted, Amtrak is undertaking an investigation into the feasibility of adding padding in the areas of seats and skirt areas.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

HAZARDOUS MATERIALS SHIPMENTS ON THE NORTHEAST CORRIDOR

SENATOR D'AMATO: Does FRA know when freight trains on the corridor are carrying hazardous materials?

ANSWER: FRA is not specifically notified when a freight train is carrying hazardous materials, either on or off the corridor. However that is academic, since virtually all freight trains on or off the corridor carry some hazardous materials.

SENATOR D'AMATO: This accident, tragic as it was, could have been much worse had the locomotives been hauling hazardous materials. What special Federal regulations are in place for the safe rail transportation of hazardous materials in the Northeast Corridor? What special inspections are conducted of trains which include units carrying hazardous materials?

ANSWER: FRA enforces extensive Federal regulations relating to the safe transportation of hazardous materials. They apply with equal force to Northeast Corridor and non-corridor operations.

FRA operating practices, motive power and equipment, and hazardous materials inspectors monitor freight trains on the corridor for compliance with the hazardous materials requirements regarding placarding, documentation, train placement, crew notification and equipment standards.

In 1980, there were 119 accidents that resulted in hazardous material release, and 34 that resulted in evacuation. During that era, FRA initiated a three-step rulemaking process to improve tank car safety. FRA requires certain tank cars hauling flammable gases, anhydrous ammonia and ethylene oxide to be equipped with head shields, thermal insulation and/or large capacity safety valves. In addition, all tank cars carrying hazardous materials must be equipped with vertical restraint couplers (effective March 1, 1985)

The Association of American Railroads and the Railway Progress Institute estimate that these safety improvements have resulted in a 68 percent reduction in fire-related tank car failures and an 81 percent reduction in impact failures. The result -- the number of accidents with releases has been cut by 55 percent. FRA's Office of Research and Development continues to study the need for any additional equipment protection.

SENATOR D'AMATO: Are there any special procedures for inspecting such trains?

ANSWER: It is important to bear in mind that virtually all freight trains contain one or more hazardous material cars. Amtrak shares every mile of its 23,500 mile system with such movements. FRA treats the issue of hazardous material inspections generally, placing the same strict inspection requirements on all hazmat trains regardless of their area of operation.

SENATOR D'AMATO: At a minimum, shouldn't Conrail locomotives pulling trains carrying hazardous materials on the Northeast Corridor be equipped with automatic stopping devices?

ANSWER: I am - pending a review of all relevant evidence - of the opinion that they should. FRA will conduct a formal rulemaking proceeding on the issue this year. There is, however, a counter argument offered by freight operators that you should be aware of.

Each freight car has movement in its draft gear of up to one foot, commonly referred to as slack. Thus, a 100-car freight train may have up to 100 feet of slack. When that train is stretched (in draft) as when ascending a long grade, it will be 100 feet longer than where the cars are bunched together (in buff) on a long descending grade. When such a train moves over a crest, part of the train is in draft on the ascending grade and part of the train is in buff on the descending grade. Such a train may be on several ascending and descending grades at the same time causing the slack action to be constantly changing the length of the train. An important element of a locomotive engineer's skill is knowing the behavior of the slack action in his train at all times.

As the slack runs out in draft, forces can be developed that will cause draft gear to be destroyed, separating the train and causing the brakes to be applied in emergency (this raises the possibility of derailment). As the slack runs in, in buff, forces can be developed that will cause cars to jackknife and derail, turning a minor incident into a major hazardous material accident. These forces are developed by the weight of the freight cars depending on the movement permitted by the slack action.

A skilled engineer operates his train in a manner that avoids excessive draft and buff forces. However, during critical moments an undesired brake application can be disastrous to even the most skilled engineer. With automatic train control, the requirement that the engineer apply the brakes during a critical moment or suffer an imposed brake application as an alternative, could cause excessive buff forces that would derail his train.

FRA has conducted a study that, theoretically, shows less than a full service brake application with automatic train control would not result in excessive buff forces in a freight train and would safely stop the train without derailment. This concept has not yet been actually tested using automatic train control equipped locomotives. Actual testing would also have to consider spacing of roadway signals to assure braking distances are adequate under all circumstances. It is my view, however, that manufacturers can engineer around these difficulties to produce a safe system.

SENATOR D'AMATO: Shouldn't some of the Conrail sale proceeds be used for this purpose rather than for deficit reduction?

ANSWER: No. Conrail has clearly established itself as a major Class I carrier fully capable of generating sufficient revenues to service its plant and equipment without Federal help. Over the last five years, 1982-1986, Conrail has reported net income in excess of $1.85 billion. If such devices are deemed appropriate, Conrail's cash resources should be adequate to pay the roughly $20 million required for the equipment and installation.

FREIGHT AND PASSENGER SERVICE SEPARATION

SENATOR D'AMATO: Should some of the proceeds from the sale of Conrail be used to finance the separation of freight and passenger rail service on the Northeast Corridor? (NOTE: FRA's November '86 report, "Northeast Corridor: Achievement and Potential," says it would cost from $23 million to $344 million to fund eight possible separation options, such as improvement of alternate routes now owned by Chessie, and removal of highway grade crossings.)

ANSWER: The Administration and the Congress have agreed that proceeds from the sale of Conrail should reduce the Federal deficit. Specific transportation appropriation proposals should stand or fall on their own merits, irrespective of the sale of Conrail.

SENATOR D'AMATO: Should some of the Conrail sale proceeds be used to install automatic stopping devices on Conrail freight locomotives that use the Northeast Corridor?

ANSWER: Conrail is perfectly capable of financing the expense from its own revenues. The probable $20 million cost is a small percentage of Conrail's $480 million reported profit. Proceeds from the Conrail sale should go toward reducing the Federal deficit.

SENATOR D'AMATO: Why doesn't FRA establish standards for testing and licensing engineers?

ANSWER: We believe that it is entirely appropriate for FRA to have authority over rail employees and urge Congress, as a first step towards any licensing process, to provide FRA with that authority. Given the authority over rail employees, however, I would stress that a Federal licensing program for rail engineers may, for the sake of licensing, not be a sure answer to enhancing railroad safety. We all want to make sure that employees running our trains are trained and qualified, but the creation of a new, large bureaucracy may not be the answer. I should emphasize that rail accidents have not resulted from engineers being unskilled or untrained. To the extent engineers have been personally negligent, it has been because of such human factors as failure to observe rules, inattention, or substance abuse.

Each railroad does require training and proficiency tests for its engineers. However, public confidence requires a full public review of current practices of hiring, training and qualifying locomotive engineers. As soon as we obtain authority over employees, I will initiate an inquiry. And as a result, we may find it necessary to establish standard qualifications and procedures that all railroads must incorporate into their hiring and training processes.

The issue that the Chase, Maryland, accident raises is the reality that a well-qualified engineer like Ricky Gates has a poor automobile driving record -- reckless driving and DWI charges -- about which his company has no knowledge nor ability to access to such information. To the extent that a train engineer is charged with enormous public safety responsibilities, I think auto driving records and violations reported to the NDR should be made available to railroads or the FRA.

ACCIDENT CAUSE

SENATOR D'AMATO: Mr Riley can you address the level of impairment of the Conrail engineer at the time his locomotive ran the signals ahead of the train? If you are not in a position to speculate on that aspect of the accident, can you inform us who will make that determination and when?

ANSWER: The FRA will ultimately be a finder of fact on that issue and it would be improper for us to prejudge it prior to conclusion of public evidentiary hearings. The National Transportation Safety Board has scheduled a public hearing for the week of March 30, 1987, in Baltimore at which expert testimony will be taken. We believe that process will help to illuminate the meaning of the toxicology results in the framework of all the human performance data. The Civil Aeromedial Institute report on both the Conrail engineer and brakeman advised FRA that the results could be interpreted as indicating that cannabinoids were from:

- chronic use or

- use over six hours prior to sampling.

The samples were obtained from the engineer about five hours after the accident and from the brakeman about eight hours after the accident.

DRUG REGULATION

SENATOR D'AMATO: I realize the current regulation has only been in place a short period of time. Industry now must test before employment and after an accident, as well as under certain other circumstances. Does this rule, however, correct the problem of drug and alcohol abuse in the rail industry? What more needs to be done?

ANSWER: There are, unfortunately, no complete answers to the problem of substance abuse. However, the data compiled over the first year of testing suggests that the rule has produced substantial behavior modification in the industry. While it is difficult to make a numbers comparison, since the data was not available prior to the FRA post-accident testing provisions, the situation in the industry in unquestionably better.

Between February 10, 1986 and January 15, 1987, FRA obtained samples for toxicological analysis from 759 employees, following 175 major accidents. Of these tested, only 9 (1.2%) tested positive for alcohol and 29 (3.8%) tested positive for illicit drugs (marijuana, cocaine or methamphetamine). In the years considered for the FRA rulemaking (1975-1984), FRA review of autopsy data for railroad employees killed on the job in train incidents showed the presence of appreciable levels of alcohol or drugs in 16 percent of the cases. In addition, FRA found that about 9 percent (3 of 33) of the most serious train accidents resulted from alcohol use.

The Southern Pacific Transportation Company has maintained data on its urine testing program after human factor accidents. The SP program is similar to FRA's program of reasonable cause testing. The SP reports a reduction in its alcohol/drug positive rate for transportation department employees from 22.4 percent in August of 1984 down to 5 percent in the current period.

While significant progress has been achieved, as a result of the FRA regulation and railroad efforts, it is doubtful that the FRA and the industry can get below these levels without a program of random testing. The identification of drug users based on signs and symptoms is very difficult for many reasons, including the sometimes rapid dissipation of symptoms after the use of certain drugs. For instance, in the Chase, Maryland, accident, the engineer and brakeman on the Conrail train were interviewed by a supervisor shortly after going on duty and prior to the accident. This supervisor was trained in detecting the signs and symptoms of drug use, but took no exception to the employees. Post-accident testing of both of these employees found evidence of marijuana use in their blood and urine.

FRA has obtained data indicating the use of illicit drugs in 3.8 percent of the accidents with documented post-accident test results. The 3.8% chance of encountering a drug using engineer is not acceptable and calls for further action on the part of the Federal government. Secretary Dole has announced her intention to propose random drug testing where appropriate across all modes.

SENATOR D'AMATO: This accident points out that a Federal regulation can be unenforced after an accident. What is FRA doing to ensure industry compliance with its drug and alcohol rule?

ANSWER: FRA has been actively monitoring implementation of the regulation by the railroads. Compliance by the industry has generally been very strong. Of the 175 testing incidents only three raised compliance issues. FRA has taken prompt and severe action on the non-compliance cases. Violations seeking the maximum penalty have been filed in both over and under testing incidents.

FRA has also held regional conferences for the industry, prepared a detailed Field Manual for use in implementing the program and trained its field staff on the regulation. Numerous training and briefing sessions have been provided by both headquarters and field personnel.

SENATOR D'AMATO: The testimony of the Railway Labor Executive's Association briefly discusses the substance abuse program in place at the Union Pacific and Chessie Railroad. Has FRA considered mandating this approach industry-wide; if not, why not?

ANSWER: FRA mandated key elements of this program in the regulations that became effective in February 1986. Subpart E provides that each railroad will establish policies to identify employees who abuse alcohol or drugs. The regulation also provides for self or co-worker referral, for a leave of absence for treatment, confidentiality, and permits the railroads and labor representatives to negotiate alternate versions. However, no regulation can substitute for cooperative efforts between the railroads and their employees. We cannot mandate employee prevention or referral committees, order managements to evidence sincere concern for the well being of those troubled by substance abuse, or draft the appropriate collective bargaining agreements to provide a framework for joint action. We can, however, encourage such action; and we have been doing so actively through Operation Red Block.

For instance, FRA has been facilitating the implementation of the Operation Red Block program for several years. In conjunction with the effort, FRA has brought together the leaders of all major railroads and the national labor leaders. The effort involved the personal efforts of Administrator Riley, who participated in the meetings and took part in a film on Operation Red Block. FRA paid for the conferences, film and promotional material.

New York to Albany

SENATOR D'AMATO: Let's compare the Northeast Corridor to the freight/passenger corridor between New York and Albany. What requirements were negotiated between FRA and the State of New York back in the late 1970's when New York upgraded passenger speeds to Albany? Is it not the case that New York was required to upgrade the roadbed to provide transmission for cab signals and automatic train control?

ANSWER: On June 17, 1947 the Interstate Commerce Commission issued order number 29543 which required each railroad to"...install on that part or parts of its lines over which any passenger or freight train is operated at a speed of 80 or more miles per hour an automatic train stop or train control system or automatic continuously controlled cab signal system..." This order has been enforced by the FRA since it assumed safety responsibility from the ICC and is currently covered in Title 49 USC part 236.0(d). The State of New York simply complied with existing regulations when it upgraded the railroad for higher passenger train speeds in the late 1970's.

SENATOR D'AMATO: What percentage of passenger locomotives operating between New York and Albany has both cab signals and automatic train control? What percentage of freight locomotives are so equipped? Why isn't there a requirement for freight locomotives to be equipped with at least cab signals if the investment has already been made in track transmission?

ANSWER: All turboliners and F-40 locomotives operate between New York and Albany that are equipped with automatic train control. Metro North advises that all regularly assigned commuter equipment is equipped with automatic train control.

Metro North also advises that Conrail units operating on these tracks are equipped with automatic cab signals. Amtrak has 6 FL-9 locomotives in use equipped with automatic cab signals and automatic train stop with plans being made to add automatic train control. All Amtrak trains are equipped with automatic cab signals.

FRA has interpreted the requirement for cab signals (49 USC Part 236.0(d) to mean that, unless a waiver is granted, all vehicles operating on tracks equipped to transit cab signals must be equipped with cab signals. No waiver has been requested for the New York - Albany territory.

It should be noted that the track transmission system for cab signals has not yet been put in service between New York and Croton-Harmon, about 34 miles. Installation is now underway in this segment.

The most expensive part of the ATC system -- the roadbed transmission infrastructure -- is in place on Northeast Corridor trackage from Washington, D.C. to Boston. Because of FRA's efforts, much of that system has been upgraded. Since this is the area of the country with the heaviest passenger volume, and the area in which passenger trains operate at the highest authorized speeds, we believe there is merit in exploring the feasibility and potential safety impact of requiring that non-Amtrak locomotives operating on this segment of the Corridor be equipped with receiver units. Conrail's freight volumes have declined substantially since this option was discussed in the mid-1970's, and we believe the issue is one of a number of options worth revisiting in our post-accident assessment. We intend to do so.

SENATOR D'AMATO: Will FRA seek to extend any requirements for automatic train control beyond the Northeast Corridor, for example to Albany? If not, please explain.

ANSWER: The FRA does not now have any requirements for automatic train control on the Northeast Corridor. The FRA is considering a proposed rulemaking on this subject. Other segments of railroads, which involve a similar mix of freight and passenger service with their associated variations in train speeds, could be subjected to the same logic and rationale which is causing the FRA to consider requiring the use of automatic train control on all trains using the Northeast Corridor. FRA will consider the issue of encompassing other segments of railroad within any rulemaking proposal.

AUTOMATIC TRAIN CONTROL

SENATOR D'AMATO: The Safety Board's testimony refers to a 1970 recommendation that the Federal Railroad Administration study the feasibility of requiring automatic train control. Please describe what that study indicated as regards the Northeast Corridor.

ANSWER: In 1969 two Penn Central commuter trains collided head-on near Darien, Connecticut, resulting in 4 fatalities and 43 injuries. The collision occurred in non-signaled territory where trains operated by timetable, train orders and manual block system rules. The accident was caused when one of the trains operated past the siding where it was instructed by train orders to meet the other train. In its accident report RAR-70-3, the NTSB recommended that FRA study the feasibility of requiring a form of automatic train control at points where passenger trains are required to meet other trains.

In 1976, the NTSB issued similar recommendations that FRA require an adequate backup system for mainline freight trains that will insure that a train is controlled as required by the signal system in the event the engineer fails to do so. The NTSB subsequently closed these recommendations as it was evident they were not practical.

Five days after the Chase, Maryland accident, the NTSB altered its position and reiterated its 1976 recommendation. Since we do not know all the factors that were considered by our predecessors. I intend to re-examine this issue. Attached herewith is a copy of my response to the NTSB which provides substantial insight to my position.

(The letter follows:)

LETTER FROM JOHN H. RILEY, ADMINISTRATOR, FEDERAL RAILROAD ADMINISTRATION

January 20, 1987

The Honorable James E. Burnett, Jr.
Chairman
National Transportation Safety Board
800 Independence Avenue SW
Washington D.C. 20594

Dear Chairman Burnett:

As you know, Automatic Train Control (ATC) has been a functioning part of Northeast Corridor operations for a number of years. The ATC system requires installation of both a transmission system in the roadbed, and ATC devices in all locomotives operating over the roadbed transmission network. Roadbed transmission units have been installed on the Corridor from Washington, D.C. to Boston; virtually all Amtrak power units operating on the Corridor have now been equipped with ATC devices. The Amtrak locomotive destroyed in the collision of Sunday, January 4, 1987, was ATC-equipped.

In your January 15, 1987 letter, you reiterated your recommendation that the Federal Railroad Administration ...

> "Promulgate regulations to require an adequate backup system for main line freight trains that will insure that a train is controlled as required by the signal system in the event that the engineer fails to do so." (i.e., Automatic Train Control)

You concluded that "... there was sufficient evidence without the need to make additional inquiries and studies for FRA to take timely regulatory action." While we respect your views and appreciate your intentions, FRA must question this recommendation for the same reason we previously questioned it -- simple practicality.

ATC roadbed infrastructure costs approximately $240,000 per mile to install on double track main line, $160,000 per mile on single track line. There are approximately 20,000 miles of multiple-track, signalled main line in the United States and 53,000 miles of single track main line. The cost of simply installing the infrastructure required by your recommendation exceeds $13.3 billion. Equipping only 10,000 locomotives of the roughly 23,000 locomotives in the nation's fleet would cost an additional $500 million. The total cost of your recommendation -- at least $13.8 billion -- approaches the net worth of the nation's main line railroads. Moreover, this calculation, and your proposal, fail to take into account the numerous commuter trains that share trackage with Amtrak and the nation's freight railroads. Signal compliance by commuter operators is at least as important as compliance by freight railroads. Finally, the ATC system, even at such unrealistic cost levels, addresses only one of the various accident exposures that can arise in the railroad operating environment.

The Federal Railroad Administration takes very seriously NTSB's recommendations. But FRA has very different responsibilities. Our regulations are not recommendations; they have the force of law. We must consider the realities of compliance in a real world environment, weigh cost-benefit issues, and steer the industry's safety investment to the areas which will have the greatest marginal impact in improving its safety performance. The fact that we have helped cut the accident rate in the railroad industry in half over the past decade is testimony to the effectiveness of FRA's safety program.

A recommendation with costs approaching the net worth of the industry itself is clearly not a real world option.

There may, however, be alternatives worth investigation.

The most expensive part of the ATC system -- the roadbed transmission infrastructure -- is in place on Northeast Corridor trackage from Washington, D.C. to Boston. Because of FRA's efforts, much of that system has been upgraded. Since this is the area of the country with the heaviest passenger volume, and the area in which passenger trains operate at the highest authorized speeds, we believe there is merit in exploring the feasibility and potential safety impact of requiring that non-Amtrak locomotives operating on this segment of the Corridor be equipped with receiver units. Conrail's freight volumes have declined substantially since this option was discussed in the mid-1970's, and we believe the issue is one of a number of options worth revisiting in our post-accident assessment. We intend to do so.

Having financed the modernization of ATC on the Northeast Corridor, we are thoroughly familiar with its advantages and its limitations. And I must caution the Board that the system is not a panacea.

ATC cannot prevent an accident that involves a false proceed signal indication, since the signal system triggers the ATC. It addresses one, but only one, of the several accident situations that can arise in a railroad operating environment -- the case in which a train crew fails to respond to warning devices and runs an operating signal. That is an extremely rare occurrence, although its consequences can be severe. The system is susceptible to tampering, and freight operators have questioned whether its effectiveness in stopping short, light weight passenger trains necessarily implies that it would be equally safe or effective in stopping heavy, long haul freights. Moreover, automatic train control does not guarantee that a train will, in fact, stop short of a signal. It slows the train to 20 m.p.h., and the crew is free to run through that signal at that speed if it chooses to do so. While some of these questions are susceptible to resolution or remedial design, they are factors to be weighed in judging what is a complex and difficult issue.

Our views on the so-called "dead man's control" device have not changed since our last correspondence. By voluntary agreement with FRA, Amtrak has installed dead man installation in all passenger locomotives operating with one man in the cab. However, there continue to be serious questions about the technology. Although 60 percent of all over-the-road locomotives now have dead man control in one form or another, it is the most unpopular safety device on the train and the most easily (and frequently) disabled. FRA redirected all interested parties to study this and other issues relevant to locomotive cab safety and to monitor the state-of-the-art in equipment evolution. That effort will form the basis of a formal safety inquiry on locomotive cab safety, which we intend to commence upon completion of the current communications rulemaking.[1] There have been real advances in technology, particularly with the latest Pulse System, that may address the reliability problems that have plagued this equipment from its inception. FRA is funding research into passive, unobtrusive alerter devices. Three initial proposals were reviewed by the Locomotive Control Cab Committee and it recommended further work on a scanning device using ultrasonic sensors. Device is tamperproof and requires no extraordinary action by engineer. We will evaluate these issues in the course of the cab safety proceeding and, of course, we will seek your counsel at that time.

We appreciate the Board's concern, and will continue to keep it apprised as we evaluate this and other issues stemming from the recent Conrail-Amtrak collision. We will also, as we have in the past, invite NTSB testimony in all inquiries and rulemaking proceedings we may initiate on these issues.

Yours very truly,

John H. Riley
Administrator

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[1] Two and one-half years ago, FRA established four major regulatory objectives--a comprehensive Alcohol and Drug Rule, a rulemaking on rear end telemetry devices and remote control rear end warning systems, a communication inquiry and a locomotive cab inquiry. That process remains on schedule, with alcohol and drug and telemetry rulemakings complete, and the communication inquiry now in process. Of course, the Agency has pursued other, less consequential proceedings while these major rulemakings were in process.

AUTOMATIC TRAIN CONTROL

SENATOR D'AMATO: On what grounds was this safety improvement not required on freight locomotives in the corridor, especially since the roadbed transmission is already in place for the system in Amtrak's passenger locomotives?

ANSWER: Answered in previous questions' responses. While we do not know all factors which were considered by our predecessors, I intend to reopen the proceeding.

SENATOR D'AMATO: Has Conrail, or any other railroad or commuter system sought a waiver from any railroad requirement to install automatic train control. (if so, on what grounds: cost, derailment risk, etc?)

ANSWER: Since 1947 Federal rules have required that where any train is operated at a speed of 80 or more miles per hour, an automatic cab signal, automatic trainstop or automatic train control system shall be installed.

Since 1947, 13 railroads have petitioned for relief from this requirement to permit operation of passenger trains in excess of 80 mph without these systems. The predominant reasons for petitioning were costs associated with the installation and maintenance of the qualifying systems, and the delay and servicing time. Each petition was denied.

In addition, four railroads petitioned for relief from the requirement to the extent they not be required to install the qualifying devices on locomotives operating in freight service in equipped territory. The predominant reason for petitioning were prohibitive costs and freight locomotives operate in equipped territory at speeds below 80 miles per hour. These petitions were approved in 1949 and 1950.

Most of the petitions occurred in the late 1940's and early 1950's. The most recent petition occurred in 1983 when the New York State Department of Transportation (NYDOT) petitioned for relief from the requirements to the extent that passenger trains be permitted to operate over Conrail tracks between Hoffmans and Buffalo, New York at speeds up to 90 miles per hour without the installation of any of the required systems. NYDOT's justification for relief was improved passenger braking capabilities, continuous welded rail installed in that trackage, Canadian passenger trains operate at 90 mph without such systems, and the need to reduce travel time between those points. The petition was supported by Niagara County, the Herkimer - Oneida Counties Transportation Study, the Empire State Passenger Association, Inc., Rome Area Chamber of Commerce, and the National Association of Rail Passengers. The petition was opposed by Amtrak, Conrail and three rail labor organizations. FRA found the petition was not in the interest of passenger safety and it was denied June 14, 1984.

SENATOR D'AMATO: Your statement questions the use of automatic train control in heavy long haul freight situations. Why hasn't FRA tested automatic train control on a mix of freight situations to know how effective or risky it really is?

ANSWER: My statement reflects the fact that the freight railroads question its use. My statements have reflected my personal view - and FRA's view - that the problems are solvable technologically. That subject is discussed in length in a previous question.

FRA has conducted a study of the feasibility of installing automatic train control on freight locomotives. In current automatic train control systems, each change of the cab signal aspect to a more restrictive indication requires application of the brakes within eight seconds or a penalty brake application will be imposed. This brake application is at a service rate until maximum brake cylinder pressure is obtained. In heavy long haul freight trains, such a brake application at a critical moment can cause excessive buff forces that will result in derailment.

FRA's study showed that, theoretically, a less than full service brake application with automatic train control would not result in excessive buff forces and would stop a freight train safely. However, a less than full service brake application may result in longer braking distances that would require respacing of roadway signals or reduced freight train speed limits. This concept has not yet been incorporated into an automatic device. However, as a result of the Chase, Maryland accident, Conrail is exploring this concept with a manufacturer of automatic train control equipment.

An alternative to this concept would be to limit freight trains with automatic train control to a maximum of about 40 cars. With a fewer number of cars, slack action is reduced to the point that excessive buff forces sufficient to cause derailment cannot be generated by a full service brake application.

SENATOR D'AMATO: Does FRA support the Safety Board's recommendations of last week that Amtrak require automatic train control in the corridor?

ANSWER: Our position is outlined in the attached letter, we intend to act on the issue independently of any action Amtrak may take.

[CLERK'S NOTE.—The letter appears with the answer to a previous question submitted by Senator D'Amato.]

SENATOR D'AMATO: What about the 'full stop before proceeding' recommendation?

ANSWER: FRA finds little justification for requiring trains lacking automatic train control to stop and request permission before proceeding onto the high speed tracks. There is no logical reason to require such a train to come to a stop if the train, under the control of an engineer who is in full possession of his faculties, is being operated in accordance with the signal indications. If the engineer is incapacited in some manner, there is no basis to believe that he would be more likely to obey an operating rule requiring a stop than to obey a signal indication requiring a stop.

Further, the requirement that such trains stop before diverging from a 110-mph track to a 125-mph track through a signal protected turnout would unnecessarily delay following traffic and could lead to unsafe practices, ultimately resulting in an accident or incident.

INSPECTORS

SENATOR D'AMATO: Do you feel that 325 Federal inspectors nationwide is a sufficient level? How many inspectors are responsible for safety in the Northeast Corridor?

ANSWER: Yes, we do, and the steady improvement in railroad accident statistics over the last decade is the past evidence, In addition, FRA has recently instituted new procedures and modeling techniques to more effectively manage the resources available for the inspection of the industry and the enforcement of FRA's rail safety program.

To ensure that the resources are appropriate to the problem, and to further ensure that those resources are properly distributed, FRA has developed a Safety Enforcement Staffing and Allocation Model consisting of three distinct elements.

The first element is the Safety Enforcement Staffing model. It compares the performance of inspectors against accidents and casualties, normalized by revenue ton-miles to determine the marginal return per inspector at various levels of inspector staff level by demonstrating the point at which increasing marginal returns per inspector would become decreasing.

When historical work measures were compared against historical productivity per inspector, the result was a justification for 330 field professionals with a correlation of .97.

This finding does not take into account the possible need for more inspectors when new responsibilities are created from new rules such as the alcohol and drug rule. Also, if the industry failed in the future to comply with Federal regulations to the extent they are complying today, more inspectors might be needed to assure compliance. Accuracy of the staffing model is dependent on railroads maintaining their current level of compliance with railroad safety requirements.

The second element of the staffing model determines the optimal allocation of the inspector staff throughout the eight FRA regions. The model bases its allocation on the principle of risk as determined by:

- casualties
- accidents
- employees
- tons
- size (square miles)
- carloads of hazardous materials
- population density
- passenger traffic
- railroad mileage

The third element takes each region's staffing level and allocates it among the five inspector disciplines, or areas of specialty. It uses inspector activity and territorial differences, as measured by the following five factors, to divide the resources among the five disciplines:

- reports filed
- violations issued
- complaints handled
- inspections conducted
- other

The three elements of the model are viewed sequentially. The first element determines the total amount of resources available. The second element takes the number from the first and allocates the resources among the eight regions, and the third takes each region's allocation and divides it among the five disciplines.

In addition to the allocation models, the Office of Safety has instituted a regional productivity measurement and improvement procedure beginning in calendar year 1987, in conjunction with the annual National Inspection Plan. This procedure measures work units produced per hour to track, compare, and improve the productivity of the available inspector resources. It allows comparisons among regions, and eventually from year to year, so that management can target specific problem areas requiring improvement.

There are 62 Federal and 21 State railroad safety inspectors in the Northeast Corridor States as follows:

FEDERAL/STATE INSPECTORS ON-BOARD
(in Northeast Corridor States)

STATE	MP&E	OP	TRACK	S&TC	H/M	TOTAL
Massachusetts						
Federal	3	3	3	1	1	11
State	-	-	-	-	-	-
Connecticut						
Federal	-	-	-	-	-	-
State	-	-	1	-	-	1
New York						
Federal	4	1	2	2	1	9
State	5	-	3	-	-	8

STATE	MP&E	OP	TRACK	S&TC	H/M	TOTAL
New Jersey						
Federal	4	2	3	1	-	10
State	-	-	2	-	-	2
Pennsylvania						
Federal	10	5	5	3	3	26
State	3	1	4	-	-	8
Maryland						
Federal	2	1	1	1	1	6
State	1	-	1	-	-	2
TOTALS:						
Federal	23	12	14	8	5	62
State	9	1	11	0	0	21

SENATOR D'AMATO: Have you reviewed the record of inspections in the Northeast Corridor in light of this accident? Please provide the results of that review; for example, when was the last time the signals were inspected at the intersection where the accident occurred?

ANSWER: Since January 1, 1982, FRA's signal and train control inspectors working on the Northeast corridor have submitted 760 Signal Inspection Reports covering the inspections of 6311 signals, switches, locomotives and other units, and 5914 records.

FRA last inspected Gunpow Interlocking November 22, 1983. Gunpow Interlocking records were last inspected September 10, 1985. Immediately following the accident, exhaustive tests were performed and it was determined the signals and the interlocking were functioning as intended.

FRA regulations require regular railroad inspections of all elements of a railroad's signal system. For example, the following inspections that would apply to Gunpow Interlockings are required:

49 C.F.R.		
.104	Shunting fouling circuit	test every 3 months
.106	relays	varies with type from 1 to 4 years
.107	grounds	test energy bus every 3 months
.108	resistance/insulation	test every 10 years
.109	timing devices	test every year
.377- .380	electric locking	all types must be tested every 2 years
.382	switch obstruction	test every month

SENATOR D'AMATO: When was the last time Federal inspectors reviewed the operating practices of Conrail engineers before departing to ensure that cab signals, radios and alerting whistles are fully operational?

ANSWER: The inspections of the railroad's operation conducted by OP inspectors encompass the entire range of operating matters, including the three specific items mentioned. These include obsevations made to determine the adequacy of the railroads efficiency testing program. These programs, which are required by FRA, are designed by each railroad for use by carrier supervision to check employee compliance with both Federal and company rules and instructions. It is while monitoring these activities, that FRA reviews the actual testing of cab signal, radios and alerting whistles. These are on-going activities and are conducted at some location on the Conrail system almost daily.

SENATOR D'AMATO: If taped-up alert whistles are as commonplace as we are led to believe, why don't Federal inspectors institute actions to end this practice?

ANSWER: Where devices are found disabled by tampering, fines are assessed against the carrier. I have included a list of 18 such instances found during recent nationwide inspection activities and I intend to assess each of the railroads for these violations. However, in each case, it was the individual employee and not the carrier that tampered with safety devices. FRA only has authority over railroad companies and does not have authority over railroad employees. Given jurisdiction over individual employees FRA can police such violations far more effectively, in addition to having an additional measure of deterrence to such actions.

Violations Found January 29, 1987-February 12, 1987

Railroad	Type Violation	Explanation	Civil Penalty
DRGW ATK 244 Train No. 6 1-29-87	Alerter Denver, CO	On an inbound train the alerter was found cut-out and the seal broken. The alerter is an electronic audible alarm and light.	*General condition to be assessed $250-$2500
ATK 237 Train No. 3 1-29-87	Alerter Los Angeles, CA	In-service-alerter cutout. The circuit braker to the alerter control box and the alerter magnet valve were inoperative. The circuit breaker was in the open position and the air cock to the magnet valve was cut out. The warning device was a light and audible alarm.	*
ICG-V ATK 371 1-29-87	Cab signal failure en route Effingham, IL	Excessive speed The automatic train stop was cutout by the engineer en route and train proceeded at 90 mph. Federal regulations require that train speed may not exceed 79 mph under these circumstances.	*

Railroad	Type Violation	Explanation	Civil Penalty
UP ATK 391	Alerter and overspeed Kansas City, MO	The alerter valve located on the air brake equipment rack and the overspeed control valves were cutout. The alerter is a light and an electronic audible alarm and the warning device for the overspeed is a light and a whistle.	
UP 3334	Dead man pedal, Alexandria, LA	Various means were being used to hold the dead man pedal in a down position. These included the weight of a wrench, brake shoes, wooden and metal flag staffs. This nullifies the automatic brake application feature of this device. UP locomotives are not equipped with an alerter light or whistle. However, a penalty brake application is indicated by the venting of air.	*
UP 3632	Dead man pedal E. St. Louis, IL	Ditto	
UP MP 5042	Dead man pedal North Little Rock, AR	Ditto	*
UP 3474	Dead man pedal,	Ditto	*
	Texarkana, Ark.	Ditto	*
UP 3419	Dead man pedal Kansas City, KS	Ditto	
CR 6622 6005 6013	Cab signal audible device Selkirk, NY	The air whistle was not clearly audible throughout the cab under all operating conditions. The whistles were found to be silenced by various methods such as tape across the orifice and the whistle filled with foreign material.	*
CR 3331	Cab signal Baltimore, MD	Ditto	*
CR 5044	Cab signal Chase, MD involved in ATK accident	Ditto	*

Railroad	Type Violation	Explanation	Civil Penalty
ATK 214	Alerter Los Angeles, CA	The alerter device was cutout evidenced by observing that the circuit breaker was in the open position. When functioning the alerter provides a light and an electronic sound.	*
MKT 244	Dead man pedal, Tulsa, OK	A cast iron brake shoe was being used to hold the dead man pedal down on a locomotive being used in yard service This nullified both the air whistle alerter and automatic brake application feature of this device.	*
NJT 5144	Train control New Brunswick, NJ	The switch controlling the automatic train control was not sealed as required. If this switch is thrown it nullifies the automatic safety functions of the train control system.	*
DH 356	Cab signal ACS Baltimore, MD	The cab signal air whistle, similar to those used by Conrail, was silenced by cardboard wrapped around the whistle and held in place by a piece of wire.	*

ATK - Amtrak
CR - Conrail
DRGW - Denver and Rio Grande Western Railroad
DH - Delaware and Hudson Railroad
ICG - Illinois Central Gulf Railroad
MKT - Missouri Kansas Texas Railroad
NJT - New Jersey Transit
UP - Union Pacific Railroad

SENATOR D'AMATO: FRA found six Conrail cab alert whistles were tampered with during its post-accident, well-publicized "dragnet" inspection on the corridor. What penalties are being assessed? What follow-up inspections will be conducted?

ANSWER: FRA conducted a nationwide inspection of automatic cab signal, trainstop and train control equipped locomotives utilizing inspectors expert in these systems. Penalties will be sought for each of the 18 locomotives found operating in equipped territory with a defective device.

SENATOR D'AMATO: What other examples of equipment malfunction or tampering were found during FRA's special post-accident investigation in the corridor?

ANSWER: During the FRA's special post-accident investigation in the corridor, 1,628 locomotives were inspected. Out of this number, 9 alert systems were found disabled to the extent that they would not function as designed.

SENATOR D'AMATO: Mr. Snyder states that safety defects in the Conrail locomotive cab is an example of a nationwide problem that cabs are not inspected by qualified employees. He notes that railroads allow operating crews, who do not have adequate training, to perform such tests. He recommends legislation that would require that locomotive inspections only be performed by qualified employees.

Do your regulations allow unqualified employees perform such tests? ;Was Ricky Gates, who signed a statement that he had performed the tests, unqualified? Do you believe either FRA regulation or legislation is necessary to define qualifications?

ANSWER: FRA regulations specifically require that locomotive inspections be preformed only by qualified inspectors. Federal regulations as set forth in 49 CFR Part 229.21(c) state that "Each carrier shall designate qualified persons to make inspection required by this section." The tests performed by the qualified persons are simple in nature and they require only the ability to turn the key on the train control ground loop, observe the cab signal light changes and hear and acknowledge the alarm whistle. Mr. Ricky Gates, a qualified engineer, would have been instructed in these matters since they are part of the carrier's operating book of rules for conducting transportation and are used to qualify the operating department personnel. The carrier emphasizes the inspection and tests prior to departure, recognizing that the departing engineer is the final judge on whether the locomotive consist is safe for the service to which it is being assigned with no risk to himself, the train crew or the public. If the FRA imposed qualification requirements, the same people who perform these tests now, i.e. the engineers, would be certain to be viewed as qualified.

NATIONAL RAILROAD PASSENGER CORPORATION [AMTRAK]

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

FRA - SAFETY ASSESSMENT OF AMTRAK, 1984

SENATOR LAUTENBERG: The FRA assessment of Amtrak in the Northeast Corridor concluded that "it is being managed effectively and operated with a high regard for the safety of the passengers".

Yet a number of observations within the report are somewhat alarming, especially regarding block station operator training (page 13). "...within the just two hours of instruction and throughout the entire training cycle, trainees are told that failure to prevent delays of as little as one minute could result in immediate disciplinary actions".

This suggests that speed is more important than rules compliance. Is this indicative of the general operating attitude?

ANSWER: While it is true that we impress on operator trainees the importance of minimizing train delays to ensure that trains are promptly routed through interlockings, it is not true that maintenance of schedules is more important than safety or rules compliance. The importance of safety and rules compliance is stressed throughout an intensive five-week course to train and qualify signal block operators. Trainees receive a general orientation the first week and focus the next four weeks on learning the signal system and Amtrak's operating rules. Trainees are tested every two days after the first week and must maintain specified scores throughout the five-week course in order to qualify. After the classroom training, block operators receive on-site training, the duration of which depends on the complexity of the block station to which they have been assigned. Generally, on-the-job training for a new employee lasts one month during which time the trainee works along side an experienced block operator. Experienced employees who are transferred to a new location are generally trained at the site for approximately two weeks. There are guidelines regarding the duration of on-site training required for each block station, but employees are routinely granted additional time to qualify at the discretion of the supervisor. Both the qualified employee who has provided the on-site training and the supervisor must agree that the trainee has successfully fulfilled all the requirements before the trainee is qualified to operate that particular block station.

Furthermore, it is Amtrak's policy not to dispatch unsafe or defective equipment. Our mechanical forces in the field adhere to this policy and work diligently to ensure no passenger train is dispatched with the lead locomotive's windshield cracked or dirty, or with faulty windshield wipers. During 1986, we replaced 87 windshields on our fleet of 47 AEM-7 electric locomotives and hired (in response to BLE concerns) two additional laborers at Washington Terminal with the primary responsibility of cleaning locomotive windshields.

If such deficiencies are reported while a train is en route, Amtrak will make every reasonable effort to correct them, even if repair of the equipment results in delay. During November-December 1986, Amtrak delayed twelve trains at various intermediate locations to correct enginemen's visibility problems, ranging from cleaning a dirty windshield to turning a locomotive whose windshield was broken en route. With these efforts, Amtrak incurred an average delay of 18 minutes per train.

Certain union representatives have raised a particular incident as an example of their charge that management is heartless and uncaring and interested only in operating trains on time. In fact, no management people were involved in this incident which occurred on October 22, 1984, when Train 121, under the control of Engineer R. P. Turso, struck a trespasser crossing the tracks east of Croydon, Pennsylvania, at 4:50 p.m. The train crew informed the tower operator that some of the remains of the trespasser had attached to the front of the locomotive. The tower operator never properly communicated this information to the dispatcher and the dispatcher ordered the train to proceed to Philadelphia. As soon as it was determined that remains of the trespasser were still on the locomotive, the train was stopped immediately. As unfortunate as this incident was, the continuation of the train after the accident was the result of a breakdown in communication between the tower operator and the dispatcher, and no management employees were involved in the chain of communication.

It has been Amtrak's operating practice that if a train strikes a trespasser, the following procedure will govern: 1) train stops as quickly as practicable; 2) train is inspected by train crew; 3) if the remains are on or fouling the train, the train will not operate until the remains are moved by the state or local authorities; 4) depending on the operating conditions at the time, the train will be either terminated, with the passengers transferred to another train, or held until the remains are removed; 5) if the remains are clear of the train, a train crew member will remain at the site until supervision arrives; 6) when the train is ready to proceed, the dispatcher, or supervisor on the site, will talk to the engineman to assure that he is able to operate to the next terminal where supervision is available; 7) supervisor at the next terminal will talk to the engineman, determine with the engineman whether he can complete the assignment; if the engineman cannot complete the assignment, the supervisor will operate the train to its destination; 8) statements are obtained from crew as required.

SENATOR LAUTENBERG: The report (page 13) also stated that regarding the new interlocking central panels supervisors "were often at a loss to fully explain the functions and capabilities of the equipment". Are employees being adequately trained in the newer high technology equipment being installed?

ANSWER: Amtrak block operators are well trained in the interlocking central panels that were installed in 1984. This "NX-type" equipment is less complex and simpler to operate than the old system. Installation of the new equipment has been accompanied by programs of instruction created for each new installation, recognizing the unique characteristics of each location.

Initial instruction of regular block operators at locations receiving new NX-type machines is provided by supervisory personnel. After regular employees are qualified by this procedure, the qualifying of additional operators is accomplished in the traditional manner with on-the-job training by qualified operators. All operators, both regular and extras, are given instruction manuals and at least two hours of instruction. The added safety and operating features built into the system make it both a safer and a less complex system for the block operator to operate.

SENATOR LAUTENBERG: The FRA report (page 10) also noted that Amtrak trains "tend to be operated at speeds in excess of allowable". Not knowing the exactness of "tend", what percent of runs operate in excess of allowable speeds?

ANSWER: Based on a survey of almost 2,000 radar checks performed in 1986, less than one percent of our trains were found to have been operated in excess of allowable speeds, and appropriate action was taken in these cases.

SENATOR LAUTENBERG: Does this mean that the overspeed control equipment is not used or bypassed during operation?

ANSWER: The over speed control on an AEM-7 electric locomotive is set at 127 MPH and the cutout switch is located in the sealed train control equipment box at the front of the cabs. The engineer can cut the speed control out if there is a unwarranted penalty brake application or malfunction and must report this immediately to the dispatcher or tower operator. Improved seals are being installed on all of our on-board safety equipment, and these are inspected at the end of each run to ensure that they have not been tampered with or disabled.

SENATOR LAUTENBERG: "Safe and efficient operation of the Northeast Corridor depends upon its highly developed signal and train control system" (page 6). The report states that there is a problem of false proceeds on the Corridor, that conditions existed that could lead to even greater false proceeds and that there is a systemic failure designed into the present system that allows a train to operate at approved medium speed of 45 MPH when a speed of 30 MPH governs the route. Has this been corrected?

ANSWER: Amtrak acknowledges that there were eleven false proceeds out of about 100 million signal indications on the corridor during the period of time covered by the 1984 FRA Safety Assessment. Of these eleven failures, five were defective centrifugal relays, three were crosses and grounds, two improper cable connection, and one due to failure of an insulated joint in combination with a defective centrifugal relay. Amtrak has identified improvement projects which are already authorized in NECIP and which will resolve the problems in the system. Following is a list of those improvements and their estimated costs.

Engineering - Special program improvements for which funds are needed in FY88

Wooden relay case replacement	54 to renew	476,550
Cable renewal		
- express cable	120,000 feet	840,000
- local & track wire	40,500 feet	162,000
Track circuits		
On NEC between Landlith & New York		
Equipment & labor required	1,013 circuits 1,013 circuits	29,320,620

On Harrisburg Line		
Equipment & labor required	172 circuits	5,214,008
Total Circuits	1,185	
Boston Division	134 route miles	8,745,370
Total for above projects		$44,758,548

The premise of the question regarding "systemic failure in the present system" is inconsistent with the issue raised in the FRA safety assessment. When a passenger train prepares to make a diverging move such as entering an interlocking to cross over to another track, the distant wayside signal at trackside may display "approach limited," which authorizes him to proceed approaching next signal at limited speed (40 MPH freight/45 MPH passenger). The cab signal inside the locomotive cab will display the more restrictive "approach medium" signal, which authorizes a speed of 30 MPH. There is no "approach limited" display in the locomotive cab signal, and it is simply displayed as the more restrictive "approach medium." When this happens, Amtrak Operating Rule 281(B) states that the fixed signal indication at trackside, which displays "approach limited," will govern, and the rule authorizes the engineer to proceed approaching the next signal at a limited speed of 45 MPH.

ALCOHOL AND DRUG REGULATION

SENATOR LAUTENBERG: Are the recently implemented FRA regulations to make sure personnel "under the influence" are stopped from going to work adequate?

ANSWER: The existing FRA regulations are plainly inadequate to protect against drug or liquor impairment of train crews. In the first place, as the inspection of the Conrail crew involved in the Chase, Maryland accident indicates, it is impossible in most cases to tell whether the crew members have taken drugs. In some cases alcohol is more detectable, but not if the crew member has enough experience with alcohol to be able to appear calm and sober when, in fact, under the influence. In addition, the officer making the inspection must be very careful to be able to see some definite indication of drug or liquor use. If he orders a blood and urine test, the crew member must, of course, be taken out of service and a substitute found with resulting delay -- in some cases very substantial delay -- to the train. In addition, of course, if the test proves negative, the crew member will be entitled to reimbursement for missed pay while out of service. Since the tests usually take several days to produce results, this can become cumulatively very expensive.

The only effective deterrent is to provide genuinely random testing of hours of service employees. The issue in each case will not be whether the level of drugs or alcohol found is enough to cause impairment, since this is almost impossible to ascertain. The question should be whether the test definitely indicates the presence of drugs or alcohol in the system in order to avoid disputes regarding the degree of impairment. If the employee tests positively for drugs or alcohol, then he is in violation of Rule G of Amtrak's Rules of Conduct and appropriate action would be taken under the Employee Assistance Program (EAP).

SENATOR LAUTENBERG: The FRA drug and alcohol rule now in place prohibits employees from reporting for covered service or remaining on duty while under the influence of or impaired by alcohol or controlled substances. The rule also provides for drug and alcohol testing on the basis of "reasonable cause," which includes reasonable suspicion based on observation of employee behavior. When a train crew reports for duty, to whom do they report?

ANSWER: When a train crew reports for duty, the members must sign in at a designated location, generally where the equipment is located. The sign-in procedure entails reporting name, time on duty, and rest prior to duty. Crew members must also acknowledge receipt of the latest operating instructions posted at the sign-in location.

If there is a supervisor on duty, he observes the crew as they check in. The supervisors are required to vary their hours on duty in order to perform random inspections of train crews.

SENATOR LAUTENBERG: Are train crews required to check in with supervisory personnel before taking control of a train and departing the terminal?

ANSWER: Where the frequency of trains necessitates it, railroad officials are present around the clock to supervise operations. At locations where train movements are infrequent, supervisors are on the property during assigned hours, and on call during other periods. However, even when supervisors are on the property, they are not always able to monitor every crew prior to duty.

SENATOR LAUTENBERG: Are railroad officials present around the clock to supervise operations?

ANSWER: No. Given the number of trains that we operate and the number of potential crew sign up locations, we do not have the supervisory capacity to check each train crew before they take control of a train.

SENATOR LAUTENBERG: If the purpose of the rule is to keep employees under the influence of alcohol or drugs out of service, doesn't it make sense to have train crews check in with the appropriate officials before they take control of a train and depart?

ANSWER: We do not understand that the rule contemplated regular inspections of crews going on duty. In fact, the FRA knows that it has not been customary and would not be feasible for either Amtrak or the railroad industry in general to require all train crews to check in and be examined by supervisory personnel before taking control of a train. An analysis of the number of additional management employees necessary to initiate a practice of having management persons meet each crew member prior to his sign-up for duty indicates that an increase of 150 management positions would be necessary, costing $7,500,000 annually.

SENATOR LAUTENBERG: Suppose an employee, believing in good faith that he is not due to be called for several hours, has a few beers with friends at a ball game. He returns home and, because several persons ahead of him marked off unexpectedly, he receives a call to report for work in two hours. Would the employee be allowed to take himself out of service if he considered himself under the influence of alcohol?

ANSWER: The two-hour notice-of-call rule applies to only those employees who work on the extra board. Extra board employees traditionally have low seniority and are given an opportunity to substitute for employees who are scheduled to work but for some reason are absent. Under Amtrak's existing union contracts all those on the extra board receive a full week's pay regardless of whether they are called for duty. Accordingly, those on the extra board are paid full wages for holding themselves in readiness to be called on two hours notice, and this means they must abstain from drugs or alcohol while on the extra board list. The employee would not only be allowed but would be under an obligation to take himself out of service if he were under the influence of drugs or alcohol when he reported to work.

SENATOR LAUTENBERG: Would he be subject to discipline if he refuses to report on duty?

ANSWER: Under these circumstances, an employee would indeed be subject to discipline if he has indulged in alcohol or drugs at all while on the extra-board list. In the event of genuine illness, of course, an employee on the extra board will be excused when called.

SENATOR LAUTENBERG: Can or do FRA inspectors check railroad train crews as they come on duty?

ANSWER: On occasion FRA inspectors have checked Amtrak train crews as they come on duty.

SENATOR LAUTENBERG: Should FRA inspectors be involved in this type of monitoring?

ANSWER: Yes, on a random basis. It would not be feasible to attempt this in all cases.

SENATOR LAUTENBERG: Do you believe FRA's alcohol and drug rule needs to be modified in light of the recent accident? How?

ANSWER: (Answered in Hearing).

SENATOR LAUTENBERG: Does Amtrak have Operation Red Block or a comparable Rule G bypass program for dealing with alcohol and drug abuse?

ANSWER: Amtrak's EAP program contains essentially all of the provisions of the Operation Red Block agreement in effect on certain other railroads. In negotiations with UTU and BLE about two years ago, Amtrak sought to obtain an Operation Red Block agreement, but the union negotiators with whom we were dealing wished to postpone this until after the issuance of and an opportunity to study the FRA regulations, which were then under consideration. After the regulations came out nothing further was heard from the unions, and Amtrak went ahead with its own EAP program. Amtrak recently initiated negotiations to include union participation, and has reached agreement on this with both the engineers' (BLE) and conductors' (UTU) unions, subject to ratification by union membership.

CONRAIL OPERATIONS ON THE CORRIDOR

SENATOR LAUTENBERG: We have been told the original plan for the Northeast Corridor called for the separation of freight and passenger service. Amtrak and other parties continue to advocate removal of freight from passenger trackage in the Corridor. Has FRA done an analysis of this issue? What are your conclusions? Does freight service on the Corridor pose a significant safety hazard in your judgment? Would dedicated, well separated rail lines for freight and passenger service be feasible? Would restricting freight operations to off-hours be workable?

ANSWER: In Amtrak's opinion, the intermixture at the same time of freight service and high-density, high-speed passenger and commuter service on the Corridor is definitely a hazard. Even when freight trains use separate tracks, a derailment such as a number which have occurred in recent years could result in a serious accident to passing passenger trains.

Amtrak is advocating a separation of freight and passenger trains on the Corridor in the following manner: 1) removing as much of the through freight service to parallel lines as possible, and 2) operating the remainder, as well as necessary local industry services, during the hours when passenger service is light or nonexistent, i.e., from 10:00 p.m. to 6:00 a.m. each day. Negotiations are underway to work toward this objective with Conrail and will take place with the smaller freight carriers as well.

SENATOR LAUTENBERG: Would you be willing to restrict the movement of hazardous materials to one train movement in each direction a day?

ANSWER: (Conrail).

SENATOR LAUTENBERG: Would you be willing to operate with absolute blocks between interlockings and restricted to speeds not exceeding 30 miles per hour?

ANSWER: (Conrail).

SENATOR LAUTENBERG: Would Conrail be willing to pay a premium for movements during peak hours if it considered that movement essential as opposed to convenient? If not, why not?

ANSWER: (Conrail).

SENATOR LAUTENBERG: Is Conrail conducting negotiations with other railroads to move its freight operations off the Corridor? What is the status of those negotiations?

ANSWER: (Conrail).

SENATOR LAUTENBERG: What are the average number of "through" daily freight train movements from Washington to Philadelphia? From Philadelphia to New York? From New York to Boston?

ANSWER: South of Philadelphia: 20 (Most of these trains are Washington or Baltimore to Perryville)
Philadelphia to New York: 10
New York to Boston: 2

SENATOR LAUTENBERG: What is the average size of these movements? That is, the number of cars in a movement.

ANSWER: 90 cars.

SENATOR LAUTENBERG: How often do these trains carry hazardous cargo?

ANSWER: Approximately one-half of the freight trains that operate through on the corridor carry some type of hazardous cargo. All trains except mail, coal, or grain have the potential to carry hazardous cargo.

SENATOR LAUTENBERG: Are freight trains more prone to derailments than passenger trains?

ANSWER: There are more freight derailments, and this higher incidence is due to several differences between freight and passenger trains. The design and manufacture of freight equipment, the type of braking system employed, the braking procedure required, the heavier loads carried, and the greater length of the trains, all make it more likely that a freight train will derail than a passenger train.

SENATOR LAUTENBERG: Do freight trains have a greater incidence of serious mechanical malfunction than passenger cars?

ANSWER: It is not practical to compare freight cars with passenger cars in regard to mechanical malfunction because each is equipped with different systems such as different trucks, braking systems and couplers.

SENATOR LAUTENBERG: Does Conrail regularly move trains on the Corridor simply because it's convenient rather than essential?

ANSWER: (Conrail).

SENATOR LAUTENBERG: Because of recent federal legislation the Consolidated Omnibus Budget Reconciliation Act of 1985, Amtrak was able to renegotiate the rate it charges Conrail for track usage. What was that rate before the legislation and what is the new rate? How does that compare with the rates charged by other railroads to you for using their track, and how does that compare to what Conrail pays on other carrier's tracks?

ANSWER: The effective rate paid by Conrail before the passage of the Consolidated Omnibus Budget Reconciliation Act of 1985 was 29.2 cents per car mile comprised of both a fixed and variable component. The new rate, negotiated following the passage of that legislation, is initially 52.5 cents per car mile and increases in two increments to 60 cents per car mile on October 1, 1990. It is also subject to cost escalation according to the standard industry index. In addition, Amtrak successfully negotiated certain other issues, including Conrail's concurrence to the modification or elimination of specific facilities in the Northeast Corridor, that will enable Amtrak to realize cost savings.

There is no direct correlation between what Conrail pays Amtrak and what Amtrak pays other railroads for the use of their tracks, as Amtrak does not pay on a per-car-mile basis and because Amtrak receives a variety of other services in connection with its operations over Conrail and other railroads.

Amtrak does not have the information to compare Conrail's payments for the use of Amtrak tracks against its payments for the use of the tracks of other carriers, but we do understand that the rate for payment for use of the complex trackage and other facilities in the Northeast Corridor is substantially greater.

SENATOR LAUTENBERG: Amtrak has advocated removing freight from the Northeast Corridor. Would Amtrak be willing to reduce trackage use charges if Conrail moved during off-peak hours? If not, why not?

ANSWER: Amtrak would not be willing to reduce use charges for Conrail freight removed to off-peak hours. These charges are now set to reimburse Amtrak for an appropriate portion of overhead costs as well as for the additional maintenance-of-way costs incurred because of the operation over our tracks and interlockings of heavy freight trains. To the extent that traffic is moved to other lines, however, the total costs to Conrail would be substantially reduced.

SPEED ON THE CORRIDOR

SENATOR LAUTENBERG: Does this accident suggest that train time sheets be systematically monitored?

ANSWER: Because additional running time is built into train schedules at many locations, examining train time sheets is not a precise method of speed analysis. The present methods employed by our supervisors to systematically monitor train speeds are much more precise, i.e., use of radar guns, examination of locomotive speed recorders, and on-board inspection of locomotive speedometers.

SENATOR LAUTENBERG: Is excessive speed on the Corridor the norm or the exception?

ANSWER: It is the exception.

SENATOR LAUTENBERG: Do you routinely monitor the speed of trains (both freight and passenger) on the Corridor? How?

ANSWER: Amtrak supervisors routinely monitor train speeds by use of radar guns, examination of locomotive speed recorders, and on-board inspection of locomotive speedometers. Examination of locomotive speed recorders is primarily the responsibility of the railroad that owns the locomotive.

NORTHEAST CORRIDOR IMPROVEMENT PROJECT

SENATOR LAUTENBERG: The original Northeast Corridor Improvement Project included a number of specific safety-related projects for which funds have not been requested. Which of these investments would do the most to improve safety in the Northeast Corridor? How many bridges on the NEC are presently subject to slow orders? Would centralized traffic control north of Philadelphia make a material difference in the safety of operation?

ANSWER: A large number of capital projects funded through the Northeast Corridor Improvement Project have in whole or part improved the safety of Amtrak's Northeast Corridor. Title VII of the Railroad Revitalization and Regulatory Reform Act authorized $310 million for the continuation of NECIP and specifically identified projects that could be funded under the project. Amtrak has requested annual appropriations to fund several of projects during the last two fiscal years out of the profits authorized in this statute but not yet funded, installation of centralized traffic control north from Philadelphia to Landlith would improve safety in the NEC. There are a number of projects that are not authorized under NECIP but need to be funded. Amtrak's 1987 legislative program has recommended overriding the Railroad Revitalization and Regulatory Reform Act to authorize the following projects as part of NECIP.

(1) Complete conversion of centrifugal track relays to phase selectric circuits. Replacement of this deteriorated equipment will eliminate the false proceed signals identified by in the 1984 FRA Safety Assessment.

(2) Eliminate open line wires between Boston and New Haven. In the event of a problem on either speed tracks, this will allow Amtrak to operate reverse moves which require handwritten train orders that must be given to engineers.

(3) Complete signal cable replacement project between Philadelphia and New York.

(4) Replace wooden relay cases. Both this and the cable renewal project will eliminate deteriorated equipment that has been identified as the cause of those false proceed signals reported on the North end.

There are no bridges in the NEC with slow orders.

NTSB RECOMMENDATIONS ON TRAIN CONTROL

On January 15, the National Transportation Board issued three recommendations:

(1) That all locomotives operating on the high speed trackage of the Northeast Corridor be equipped with Automatic Train Control devices.

(2) That, in the interim, trains lacking Automatic Train Control be required to stop before entry onto higher speed tracks regardless of signal indication and to request and receive permission before proceeding, and

(3) That all locomotives allowed to operate on the high speed trackage be required to have an operable radio capable of train-to-train and train-to-station communications.

SENATOR LAUTENBERG: Do you favor the Board's recommendations?

ANSWER: Amtrak addressed all three of these recommendations in some detail in its statement which was submitted for the record. To summarize, Amtrak supports the Board's recommendation to require installation of Automatic Speed Control in all locomotives that use the Northeast Corridor and the recommendation requiring all locomotives be equipped with an operable radio capable of train-to-train communications.

Amtrak's passenger locomotives in the Northeast Corridor are already equipped with automatic speed control, and we have already moved to install this equipment on all work train equipment; the necessary material has been ordered and installation should be completed by the end of calendar 1987. The cost to Amtrak will be just under $1 million.

With respect to the commuter and freight railroads, Amtrak is starting negotiations immediately in an effort to get agreement on the installation of this equipment and a timetable for completion. Amtrak estimates that the cost to these railroads to install automatic speed control will be about $25,000 per unit.

As stated in Amtrak's prepared statement (pp. 15-16), the NTSB interim recommendation that all non-equipped locomotives come to a full stop and obtain permission from dispatcher before entering a high-speed track, pending installation of Automatic Speed Control devices, would be neither effective nor practical. The recommendation would require by rule that all trains not equipped with these devices stop in all cases before entering high-speed tracks and request and receive dispatcher permission to proceed.

This rule would be ineffective because all such movements are protected by signals, and, if the engineer is so inattentive or reckless as to disregard approach and stop signals, he quite likely will not pay attention to a provision in the rule book that says he should stop and receive permission before proceeding. On the other hand, compliance with this rule on a regular basis would seriously disrupt the operation of the railroad. It would be particularly burdensome in the heavy commuter traffic areas around New York and Philadelphia. In addition, this large number of unnecessary radio communications with already busy dispatchers would clog our limited radio channels. Amtrak would strongly oppose any such requirement.

In lieu of this interim proposal, however, Amtrak has put into effect at 12:01 a.m. on Monday February 16, a requirement that the speed of all freight traffic (including light engines in freight service) be further restricted on the NEC main line between Boston and Washington between 6:00 a.m. and 10:00 p.m., when high-speed intercity passenger and commuter traffic is heavy. From 10:00 p.m. to 6:00 a.m., however, freight traffic could continue at present speeds, and our dispatchers would be instructed to control the speed of such trains by signal or radio when they are to be passed by the relatively few Amtrak or commuter trains then operating. Amtrak's dispatchers can and will monitor and control this requirement.

Amtrak has no objection to the NTSB's third recommendation with respect to locomotives. Amtrak has in effect a rule requiring that every locomotive that leaves its terminal have a properly installed and working locomotive-type radio transmitter and receiver.

SENATOR LAUTENBERG: Does FRA have the authority to require Amtrak to adopt them?

ANSWER: Amtrak believes that FRA has and should exercise the authority to require installation of Automatic Train Control devices and operable radios for trains operating in the NEC pursuant to its authority to promulgate safety rules under the Federal Railroad Safety Act of 1970.

While Amtrak, as owner of the major part of the NEC, has the right to impose on other railroads using its tracks reasonable safety requirements, it can be anticipated that at least some of these users may not agree and will litigate by court action or arbitration our right to impose such a requirement. If, therefore, this is to be accomplished in any reasonable time, Amtrak's efforts will have to be bolstered by the imposition of a statutory or regulatory requirement on these other carriers to make this installation on their locomotives and self-propelled cars.

SENATOR LAUTENBERG: What would it cost to install Automatic Train Controls on all locomotives operating on the NEC?

ANSWER: The estimated cost to add speed control equipment to units that already have cab signals is $25,000 a unit. Amtrak does not know at this point the total cost for the various agencies to install speed control on their equipment operating in the Northeast Corridor, because we do not know how many units each carrier would have to equip or retrofit.

SENATOR LAUTENBERG: NTSB recommended installation of Automatic Control Devices in 1978 after the Seabrook, Maryland accident. Why didn't FRA issue such a rule at that time? Do you agree that if such a rule has been in effect, the crash at Chase, Maryland would probably not have occurred?

ANSWER: Amtrak believes that the installation of automatic train control devices similar to the equipment used on Amtrak passenger locomotives in the corridor would have prevented this accident. That type of accident, however, would also have been prevented by the amended rules that Amtrak adopted thereafter.

PASSENGER SAFETY

SENATOR LAUTENBERG: As a result of an Amtrak accident in Vermont in July 1984 the National Transportation Safety Board (NTSB) made a number of recommendations, including:

- replacing existing mirrors with shatterproof material;
- redesigning and modifying coach and seatback cushions to prevent their becoming dislodged; and
- developing and installing effective retention devices on overhead luggage racks.

In the Chase, Maryland accident, did injuries occur as a result of certain deficiencies in the passenger-car interior?

ANSWER: Amtrak is not at all certain what if any injuries on Train 94 were caused by deficiencies in the interior of the passenger cars. Amtrak does have an ongoing program to modify existing equipment to improve the interior of our passenger cars.

SENATOR LAUTENBERG: What actions have been taken by either FRA or Amtrak to respond to the NTSB recommendations on passenger safety?

ANSWER: NTSB recommendation 85-126 proposed use of shatterproof material for use in mirrors on passenger cars. As of July 30, 1986, the NTSB has kept this recommendation open and advised Amtrak that its action to date has been unacceptable. Amtrak continues to search for acceptable alternatives and will ask the NTSB to close this matter. Amtrak has worked with General Electric to test a plexiglass mirror — which both Amtrak and GE have rejected because it greatly distorted images. All mirrors now have a safety tempered shield which precludes large pieces from flying out of the frame on impact and is similar to the safety features built into automobile windshields. The types of injuries that have occurred are caused by direct impact with the mirror surface and not from flying glass. Depending on the force of impact, it is highly likely that these types of injuries cannot be prevented regardless of the material used.

NTSB recommendations 85-81 and 85-127 proposed redesign of coach and seat back cushions used on Amfleet cars and certain Heritage coaches to prevent their becoming dislodged when they are struck from behind. NTSB investigators of the Vermont accident revealed that passengers suffered head and facial injuries when the seat back in front of them dislodged and a piece of sheet metal that serves as part of the headrest support was exposed and became a further hazard.

Amtrak has designed a device which fits over the tip of the seat back which forms a safe plastic edge to cover the sheet metal which may become exposed on impact. In addition, a new seat cushion has been designed that should reduce the number of cushions that are pulled from their seats, exposing the sheet metal supports. Amtrak solicited bids from interested suppliers on this retrofit in mid-November and awarded a contract in December. Amtrak has already reviewed the design developed by the manufacturer and asked for certain modifications and is hopeful a final design and production of this piece of equipment will begin this spring. NTSB 85-128 recommended retention devices for overhead luggage devices. In December, 1986, a design was developed and installed as a prototype on an Amfleet coach which is now being tested. When Amtrak is satisfied with the design, all Amfleet cars will be retrofited. In addition, Amtrak has designed improved baggage restraint features into its new generation of low level sleeping cars.

SENATOR LAUTENBERG: Has an estimate been done on the costs for complying with these recommendations?

ANSWER: The following is an estimate of the cost to complete all safety-related retrofits on existing equipment.

	TOTAL UNIT COST	NUMBER OF NEC UNITS	NEC COST	NUMBER OF UNITS	TOTAL FLEET COST
Baggage rack restraints	8,332	348	2,899,536	731	6,090,692
Seat lock devices (phase I)	5,544	348	1,929,312	385	2,134,440
Seat lock devices (phase II)	5,544	0	0	122	676,368
Work train locomotive-speed control	26,857	35	940,000	35	940,000
Wayside loop code transmitter installation (NHV,NVS,PHL,PPC, WIL,BAL,WAS,PER,ODE)	30,889	9	278,000	9	278,000
AEM7 event recorders	9,000	29	261,000	29	261,000
P30 event recorders	9,000	0	0	23	207,000
Microwave oven restraints	530	69	36,570	130	68,900
Cab signal test boxes	2,000	6	12,000	10	20,000
FL9 "Touch" type alertors	3,000	0	0	6	18,000
F40 electronic warning alert	300	10	3,000	30	9,000
F40 event recorders	9,000	15	135,000	130	1,170,000
TOTAL					$11,873,400

SENATOR LAUTENBERG: In addition to these recommendations, have you ever investigated equipping passenger trains with seat belts?

ANSWER: (Answered in Hearing).

SENATOR LAUTENBERG: If not, does the Chase, Maryland accident suggest that such studies be undertaken?
ANSWER: (Answered in Hearing).

RAIL SAFETY - RAIL SAFETY RECOMMENDATIONS

SENATOR LAUTENBERG: If you were limited to making three recommendations for improving rail safety, what would they be?
ANSWER: 1) Random drug and alcohol testing of railroad employees, using computerized selection of names to ensure truly random testing and to avoid harassment.
2) Installation of automatic train controls on all locomotives operating on the Northeast Corridor.
3) Separation of freight and passenger trains in the NEC.

SAFETY PROCEDURES AND EQUIPMENT - COMPLIANCE

SENATOR LAUTENBERG: Who inspects the locomotive before it leaves the yard?
ANSWER: A qualified craft person (i.e., machinist, electrician, carman) inspects each locomotive before it leaves the yard.

SENATOR LAUTENBERG: Can anyone inspect the locomotive? That is, what are the qualifications of the personnel that inspect the locomotive?
ANSWER: Only those persons that are qualified and are knowledgeable with the FRA Rules and Safety Standards governing locomotives.

SENATOR LAUTENBERG: Who "walks the train" to make sure all cars are coupled and all the brake systems work?
ANSWER: The car inspectors walk the train to make sure all cars are coupled, and the brake systems work.

SENATOR LAUTENBERG: Who usually checks the cab signals?
ANSWER: The electricians check and test the cab signals.

SENATOR LAUTENBERG: How often are cab signals, speedometers, radios and other equipment checked?
ANSWER: The cab signals, speedometer, radio, and other equipment are all checked daily.

SENATOR LAUTENBERG: What recourse does an engineer have if a locomotive doesn't have a slip certifying that all systems/equipment work?
ANSWER: At an outlying point, the engineer would perform the inspection on his own. At a terminal, the engineer would call for the Mechanical Department to perform the inspection or test as needed.

SENATOR LAUTENBERG: Can an engineer refuse to leave the yard until all defects are corrected?
ANSWER: Yes. The engineer has the recourse of not accepting the locomotive until all systems are checked for proper operation and confirmed to him.

SENATOR LAUTENBERG: Mr. Claytor, you attribute the wreck of the Colonial on January 4th to six successive rules violations by the crew of the Conrail locomotives. All of these would ultimately have been neutralized if the Conrail engines had been equipped with Automatic Train Control. Isn't that right? Why haven't you required Automatic Train Control devices on all trains using the Corridor's high speed trackage before now?

ANSWER: Amtrak has not required ATC on all trains in the corridor because we had doubt about our contractual ability to force this on commuter and freight railroads without the assistance of Federal regulatory requirements.

SENATOR LAUTENBERG: The NTSB recommended that Automatic Train Control devices be required on all trains operating in the Corridor in 1978. Why wasn't that adopted then?

ANSWER: The main reasons that Automatic Train Control devices were not adopted back in 1978 was the tremendous outcry regarding costs from the commuter agencies and freight railroads in the Northeast Corridor, plus the ability to prevent by rule changes the type of accident that was then involved.

SENATOR LAUTENBERG: Do you favor the January 15, 1987 NTSB recommendations regarding radios?

ANSWER: Yes.

LICENSING

SENATOR LAUTENBERG: Is there a system for licensing engineers that run either passenger or freight trains? If not, why not? Should there be such a system?

ANSWER: In effect, each railroad licenses engineers to operate over its own road. In order to qualify to operate Amtrak trains, an engineer must pass a physical which includes a drug and alcohol test and must know and understand the operating rules and the physical characteristics of that railroad.

SENATOR LAUTENBERG: Who certifies that an engineer is qualified? Is it the responsibility of the carrier or the owner/operator of the track?

ANSWER: The employing railroad certifies that an employee is qualified to perform the duties of an engineer (knowledge of equipment, train handling, etc.). Then each railroad over which the engineer is to operate certifies that the engineer knows the operating rules and physical characteristics (switch and signal locations, etc.) of that railroad.

SENATOR LAUTENBERG: Are there industry-wide standards on engineer qualifications? That is, does Conrail have the same standards as Burlington Northern? If not, why not?

ANSWER: No. While there is general uniformity in most respects, there are no required uniform standards. We agree that it would be desirable to have uniform minimum standards. There are of course, There are, of course, other criteria that railroads must examine in the process of hiring and qualifying engineers to operate railroad locomotives. Accordingly, federal regulations are needed to set minimum standards for locomotive engineers. Railroads would then have authority to impose these standards and issue the engineer a certificate or license for that railroad , so long as that engineer met the additional standards imposed by that railroad. In addition, railroads should have access to the National Drivers Register to review the applicants automobile driving records, upon which licenses could be refused, and for updated information to monitor the driving records of working engineers. In addition to driving records, there may be other criteria unconnected with the job that a railroad should examine before licensing an engineer. These criteria could appropriately be identified through an FRA rulemaking. Certain aspects of these federal licensing requirements are not compatible with Amtrak's existing labor agreements.

QUESTIONS SUBMITTED BY SENATOR BYRD

SENATOR BYRD: Recent news reports indicate that one of the cars on the train involved in the January 4 accident was rated at 105 miles per hour, a rate of speed at which the Amtrak train was exceeding at the time of the accident. It is my understanding that Amtrak has set its own mile-per-hour ratings on its passenger cars. On what basis does Amtrak lower the standards of its cars?

Is the engineer made aware of the fact that he has one or more cars that are rated below the maximum speed set for the track?

Is there a standard procedure for such notification, and if so, is there a standard procedure for the engineer to follow for operating the train at the lower rate of speed? Would you furnish a full explanation of those procedures?

On the train that was involved in the January 4 accident, where was the car located in the train that was rated at the lower speed?

Does the inclusion of lower rated passenger cars present a safety factor, and if not, why not?

ANSWER: When Amtrak was formed in 1971, cars of many types and vintages were turned over to the Corporation from a number of railroads. However, Amtrak received little if any technical data on these cars. It was therefore necessary for Amtrak to develop technical information on each car type in order to use the cars safely and efficiently. In the early days of Amtrak, high-speed service of 100 MPH and greater was not an issue that Amtrak needed to address. As the Northeast Corridor, project progressed, Amtrak had to determine the speed capacity of the older cars, now known as the Heritage fleet, and the safety of those cars when travelling in excess of 100 MPH.

Fortunately, all the cars were equipped with trucks produced by the same manufacturer. Amtrak engineering met with this manufacturer to establish a standard set of guidelines to set the speed criteria for Amtrak's own fleet of cars and for any other railroads or private cars that might operate on our rail system. This set of guidelines was then given to a private consulting firm experienced in this area. Based on recommendations from both the manufacturer and the consultant, Amtrak imposed a speed limit of 105 MPH for Heritage cars out of an abundance of caution with respect to these cars not originally designed for operation at higher speeds. It is this criteria for car speed that is being used for the Heritage fleet today.

There is a standard procedure for notifying the engineer that he has a Heritage car on the train: the conductor, who is responsible for checking the manifest before beginning the run, has the duty to notify the engineer if there are any Heritage cars. The engineer's duty is to lower the speed for the train accordingly. The conductor stated that he had notified the engineer, but since the latter was killed, we have not been able to verify this.

There was a Heritage car on the Colonial on January 4th. It was the second to last car on the train. It actually sustained less damage than some of the adjacent cars rated for higher speeds. Its inclusion in the train in no way contributed to either the accident or to damage resulting from it.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

SAFETY BOARD RECOMMENDATIONS

SENATOR D'AMATO: On January 15, the National Transportation Safety Board wrote to Amtrak recommending:

-- The installation of automatic train stop devices in all Northeast Corridor trains;
-- An interim requirement for full stops before locomotives proceed into high speed track; and
-- Improved radio communications.

What actions is Amtrak taking in response to the Board's letter? What will be the cost of implementation?

ANSWER: With regard to installation of automatic train stop devices on all Northeast Corridor locomotives, it is important to understand the different types of automatic train stop systems that are now available. What the National Transportation Safety Board (NTSB) has recommended is now used on all Amtrak passenger locomotives in the Northeast Corridor (NEC) which Amtrak refers to as Automatic Speed Control or Automatic Train Control (ATC). This system automatically stops a train which passes a signal calling for reduced speed if the engineer does not initiate the required braking action within 6 to 8 seconds from the time a warning is sounded. What is sometimes called "Automatic Train Stop" is a less effective system which merely requires the engineer to acknowledge the warning; if he does not, the train is automatically brought to a stop, but if he acknowledges the warning by pressing a button, he may ignore the signal restrictions. In Amtrak's view and in that of the NTSB, this latter system is insufficient for use on the high-speed NEC, and it is important that all locomotives here be equipped with the more effective ATC-Automatic Train or Speed Control.

ATC equipment is not currently installed on all New Jersey Transit or SEPTA commuter trains. It is also not installed on freight equipment operated by Conrail, the Delaware and Hudson, or the Providence and Worcester railroads. It is also not now installed on Amtrak's work equipment.

Amtrak has already moved to install ATC on all of its work equipment; the necessary material has been ordered and installation should be completed by the end of calendar 1987. The cost to Amtrak will be just under $1 million.

With respect to the commuter and freight railroads, Amtrak has already started discussions in an effort to get agreement on a plan for the installation of this equipment, including a timetable for completion. We estimate that the cost to these railroads will be about $25,000 per unit equipped, but since we have no knowledge of the number of units involved, we are not in a position to estimate total costs.

As stated in Amtrak's prepared statement (pp. 15-16), the NTSB interim recommendation that all non-equipped locomotives come to a full stop and obtain permission from dispatcher before entering high-speed track, pending installation of Automatic Speed Control devices would be neither effective nor practical.

This proposed rule would be ineffective because all such movements are protected by signals and if, as occurred at Gunpow Interlocking, the engineer is so inattentive or reckless as to disregard approach and stop signals, he quite likely will not pay attention to a provision in the rule book that says he should stop and receive permission before proceeding. On the other hand, compliance with this rule on a regular basis would completely disrupt the operation of the railroad. It would be particularly burdensome in the heavy commuter traffic areas around New York and Philadelphia. In addition, this large number of unnecessary radio communications with already busy dispatchers would clog our limited radio channels. We would strongly oppose any such requirement.

In lieu of this interim proposal, however, we would suggest restricting the speed of all freight traffic (including light engines) on the NEC main line between Boston and Washington in the period between 6:00 a.m. and 10:00 p.m., when high-speed intercity passenger and commuter traffic is heavy. From 10:00 p.m. to 6:00 a.m., however, freight traffic could continue at present speeds, and our dispatchers would be instructed to control the speed of such trains by signal or radio when they are to be passed by the relatively few Amtrak or commuter trains then operating.

Amtrak's dispatchers can and will monitor and control this requirement, which is now being discussed with Conrail, and will thereafter promptly be presented to the other freight carriers who operate over the corridor.

Amtrak has no objection to the NTSB's third recommendation with respect to locomotives. In fact, Amtrak adopted NTSB recommendation 79071 in 1979. Amtrak currently requires that every locomotive leaving its terminal must have a properly installed and working locomotive-type radio transmitter and receiver.

SENATOR D'AMATO: When will these new requirements be in place? How will Amtrak oversee Conrail's implementation and adherence to requirements for train control; operations requiring a full stop; and train-to-train radios?

ANSWER: While Amtrak, as owner of the major part of the NEC, has the right to impose on other railroads using its tracks reasonable safety requirements, it can be anticipated that at least some of these users may not agree and will litigate by court action or arbitration our right to impose such a requirement. If, therefore, this is to be accomplished in any reasonable time, Amtrak's efforts will have to be bolstered by the imposition on these other carriers of a statutory or regulatory requirement to make this installation on their locomotives and self-propelled cars. In addition, it seems unlikely that the commuter agencies involved can obtain the necessary funding without further federal financial aid from UMTA.

In our opinion, prompt notice to and negotiation with these other carriers is the most effective way for Amtrak to proceed. As a practical matter, any effort by us to terminate commuter or freight service if the commuter and freight operators do not comply with our new restrictions would probably be challenged legally by them in the absence of a mandatory statute or regulations.

Generally, enforcement must be a responsibility of the individual railroads who use the corridor. The hundreds of commuter control cars and locomotives operating on the NEC could not as a practical matter be inspected daily by Amtrak personnel. What we can and will do is to make random tests and inspections of this equipment to be sure that these requirements are satisfied.

In fact, the primary responsibility for compliance with these and other FRA regulations must be in FRA. Amtrak does not have the resources to serve as a regulatory agency on NEC or elsewhere.

SENATOR D'AMATO: Although freight and passenger trains share trackage across the country, only in the Northeast Corridor are passenger speeds as high as 125 MPH. How feasible is it to separate freight from passengers in the Corridor?

ANSWER: It is not only feasible, but necessary. Negotiations are underway with Conrail toward this objective and it will be pursued with smaller freight carriers as well.

SENATOR D'AMATO: In the absence of a freight prohibition in the Corridor, what operating adjustments (such as off-peak movement) can be made to separate passenger and freight trains?

ANSWER: The important issue here is not to prohibit all freight operation on the NEC, but to eliminate the intermixture at the same time of high-speed passenger and commuter service with freight.

We agree with Conrail that rail freight service must be continued to many important industries that can be reached only by NEC tracks.

Accordingly, we are now negotiating with Conrail (and will follow up with other smaller freight carriers) to try to obtain an agreement to:

(1) Move to parallel lines as many through-freight movements as possible.

(2) Operate local freight movements and such through-freight trains as cannot be moved to parallel lines only between the hours of 10:00 p.m. and 6:00 a.m. when few high-speed passenger trains are operated, and even here, establish guidelines to further restrict freight movement so Amtrak can better control the times and places where freight and passenger trains pass each other in the corridor. We believe this would eliminate the danger to passenger and commuter trains from freight derailments collisions, or other accidents.

DRUG AND ALCOHOL ABUSE

SENATOR D'AMATO: Please outline Amtrak's experience with drug and alcohol abuse within its employee ranks. Does FRA's regulation give you sufficient latitude to address this problem.

ANSWER: Amtrak's Employee Assistance Program has been in existence since 1975, during which time it has proved to be a very successful source of encouragement and treatment for employees with drug and/or alcohol problems. Amtrak's EAP is a confidential program that provides professional counseling and treatment. Effective March 1, 1986, Amtrak revised its EAP policy to comply with FRA regulations, Control of Alcohol and Drug Use in Railroad Operations, 49 CFR, Part 219, Subpart E. Under the Rule G waiver provision adopted by Amtrak, an employee found to be in violation of Rule G of Amtrak's Operating Rules prohibiting the use of drugs or alcohol may, if a first offender, waive investigation of the Rule G charge and disciplinary action by choosing to enroll in the EAP.

Amtrak and union officials have discussed Operation Red Block agreements. Although we did not successfully conclude agreements, we still support Operation Red Block and would like tc join the unions in such an agreement in the near future. Discussions with union officials is currently taking place.

Amtrak performs pre-employment testing for all positions. That screening, along with the FRA post-accident testing requirements may provide useful information concerning the scope of the problem of drug and alcohol use in the railroad industry. Reasonable cause testing based on physical indications of drug or alcohol impairment or on rule violations or involvement in an accident is another helpful step toward halting employees with problems from endangering passengers. However, more is needed. Due to the subtle behavioral effects of many illegal drugs, "reasonable cause" testing of employees alone is not reliable enough. We strongly support a policy of truly random drug testing of at least all hours-of-service railroad employees, in addition to the existing "reasonable cause" testing. Senators Danforth and Hollings and Representative Shaw have each introduced legislation requiring random testing of transportation workers. The primary benefit of such a testing program will be deterrence, but it may also have some benefit in detecting the improper use of drugs and alcohol by railroad employees.

SENATOR D'AMATO: Since the January 4 accident, after which not all employees were tested as required under FRA regulations, what has Amtrak done to ensure proper drug and alcohol testing after an accident?

ANSWER: The difficult decisions facing Amtrak supervisors after the January 4th accident made it evident that the card provided to our supervisors contained ambiguities which needed clarification. The card was written by Amtrak with the concurrence of the Federal Railroad Administration, and it outlines field instructions for toxicological testing of certain employees after certain accidents. The regulations themselves are quite complicated, and the language of the car did not clearly describe the precise circumstances under which testing was required and the precise employees upon whom tests were to be performed.

Amtrak promptly issued a revision to the card which clarifies the instructions, and is now distributing a revised card just made available by FRA. We have also reemphasized the importance of tight control over our compliance efforts on the part of our senior operating management personnel.

EQUIPMENT

SENATOR D'AMATO: Are you satisfied that equipment and signals in the Corridor are inspected thoroughly by Federal and State personnel?

ANSWER: Amtrak is satisfied with FRA's inspection of signals and equipment on the NEC, but, more importantly, we have our own rigorous internal inspection system. Amtrak personnel follow our own procedure book, Instructions for Testing Signal Apparatus and Signal Systems, which is written in accordance with FRA's Rules, Standards and Instructions (RS&I) and which includes additional tests Amtrak believes are necessary above those required by FRA. FRA inspectors perform random inspections of the signals and equipment, evaluating Amtrak's test documents and results. .

SENATOR D'AMATO: Are you equally confident that equipment using the Corridor is in safe operating condition?

What responsibility does Amtrak have to insure the safe operating condition of equipment using the Corridor?

ANSWER: Amtrak is fully confident that its equipment is safe and believes that SEPTA and NJT are doing a responsible job of maintaining and inspecting their equipment. Amtrak is not in a position to do that for them. Amtrak currently does random inspections of freight trains prior to entry on NEC, but has not inspected freight locomotives or commuter self-propelled cars. Amtrak is planning to do this on a random basis, even though this will inevitably increase NEC operating costs.

SENATOR D'AMATO: Is Amtrak regularly informed of signal outages in the Corridor by Conrail?

Are Amtrak employees required to report equipment failures?

ANSWER: Amtrak itself, not Conrail, maintains all NEC signals between Washington and New York and from New Haven north to Boston. In addition to monitoring the corridor for any signal problems, Amtrak, as operator of the NEC, requires any engineers operating in the corridor to advise Amtrak of any signals problems, regardless of what railroad the engineer is employed by.

SENATOR D'AMATO: How often do Amtrak supervisors discover evidence of equipment tampering, such as taped cab alert whistles?

ANSWER: Amtrak knows of no cases of equipment tampering on its equipment in the NEC, and the only case we have found on other railroads using the NEC was the taped-up whistle we found on the Conrail engine involved in the Chase, Maryland accident.

CONSOLIDATED RAIL CORPORATION [CONRAIL]

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

FRA - SAFETY ASSESSMENT OF AMTRAK, 1984

SENATOR LAUTENBERG: The FRA assessment of Amtrak in the Northeast Corridor concluded that "it is being managed effectively and operated with a high regard for the safety of the passengers".

Yet a number of observations within the report are somewhat alarming, especially regarding block station operator training (page 13) "...within the just two hours of instruction and throughout the entire training cycle, trainees are told that failure to prevent delays of as little as one minute minute could result in immediate disciplinary actions".

This suggests that speed is more important than rules compliance. Is this indicative of the general operating attitude?

ANSWER: While the report refers to Amtrak -- the condition described certainly does not apply to Conrail. Safety is of paramount concern to Conrail, and is not compromised in the interest of speed.

SENATOR LAUTENBERG: The report (page 13) also stated that regarding the new interlocking central panels, supervisors "were often at a loss to fully explain the functions and capabilities of the equipment". Are employees being adequately trained in the newer high technology equipment being installed?

ANSWER: The report refers to Amtrak. At Conrail, extensive training is given to employees who are required to operate new interlockings or CTC control panels.

SENATOR LAUTENBERG: The FRA report (page 10) also noted that Amtrak trains "tend to be operated at speeds in excess of allowable". Not knowing the exactness of "tend", what percent of runs operate in excess of allowable speeds?

ANSWER: Conrail does not tolerate the operation of freight or passenger trains at speeds greater than those specified by Time Table Special Instructions or Bulletin Order.

SENATOR LAUTENBERG: Does this mean that the overspeed control equipment is not used or by-passed during operation?

ANSWER: No.

SENATOR LAUTENBERG: "Safe and efficient operation of the Northeast Corridor depends upon its highly developed signal and train control system" (page 6). The report states that there is a problem of false proceeds on the corridor, that conditions existed that could lead to even greater false proceeds and that there is a systemic failure designed into the present system that allows a train to operate at approved medium speed of 45 mph when a speed of 30 mph governs the route. Has this been corrected?

ANSWER: We know nothing of those reported problems in the Corridor.

ALCOHOL AND DRUG REGULATION

SENATOR LAUTENBERG: Are the recently implemented FRA regulations to make sure personnel "under the influence" are stopped from going to work adequate?

ANSWER: No. The January 4 incident illustrates the inadequacy of present regulations, which depend more upon personal observations, than upon random testing.

SENATOR LAUTENBERG: The FRA Drug and Alcohol Rule now in place prohibits employees from reporting for covered service or remaining on duty while under the influence of or impaired by alcohol or controlled substances. The Rule also provides for drug and alcohol testing for "reasonable cause" which includes reasonable suspicion based on observation of employee behavior. When a train crew reports for duty, to whom do they report?

ANSWER: This varies by location. At some points crews report to the Yardmaster, Trainmaster, Road Foreman, Crew Dispatcher or other employee. At outlying points where no other employees are on duty, Trainmasters or Road Foremen make observations, from time to time, to check employees' condition.

SENATOR LAUTENBERG: Are train crews required to check in with supervisory personnel before taking control of a train and departing the terminal?

ANSWER: See previous answer.

SENATOR LAUTENBERG: Are railroad officials present around the clock to supervise operations?

ANSWER: Not at every location at all times. Supervisors make random, spot-check observations.

SENATOR LAUTENBERG: If the purpose of the Rule is to keep employees under the influence of alcohol or drugs out of service, doesn't it make sense to have train crews check in with the appropriate officials before they take control of a train and depart?

ANSWER: There are not sufficient supervisory officers to implement such a requirement -- instead supervisors spot-check employees, during their work day, to the greatest extent possible. Even personal observation, however, does not detect all instances of drug use,as noted in the January 4 incident.

SENATOR LAUTENBERG: Suppose an employee, believing in good faith that he is not due to be called for several hours, has a few beers with friends at a ball game. He returns home and, because several persons ahead of him marked off unexpectedly, he receives a call to report for work in two hours.

ANSWER: Under these circumstances, he should advise the crew dispatcher that he is unable to accept the call.

SENATOR LAUTENBERG: Would the employee be allowed to take himself out of service if he considered himself under the influence of alcohol?
ANSWER: Yes.

SENATOR LAUTENBERG: Would he be subject to discipline if he refuses to report on duty?
ANSWER: Not normally.

SENATOR LAUTENBERG: Can or do FRA inspectors check railroad train crews as they come on duty?
ANSWER: While we are not acquainted with FRA's internal instructions to their inspectors, we see no reason why they could not check railroad employees as to compliance with FRA Regulations.

SENATOR LAUTENBERG: Should FRA inspectors be involved in this type of monitoring?
ANSWER: It should not be necessary.

SENATOR LAUTENBERG: Do you believe FRA's Alcohol and Drug Rule needs to be modified in light of the recent accident? How?
ANSWER: Yes. The Rule must be revised to permit random testing for drugs and alcohol, in order to provide a deterrent to their use.

SENATOR LAUTENBERG: Are Conrail's bypass agreements which allow for drug and/or alcohol troubled employees to seek help without fear of job loss in effect? Are they working.
ANSWER: As required by FRA regulation, Conrail has implemented a policy providing for co-worker referral of "covered employees". Since February 10, 1986, one (1) employee has elected referral to the Employee Counseling Service in accordance with this Conrail policy.

As also provided for in the FRA regulation, Conrail has negotiated and signed a separate co-worker referral agreement with the United Transportation Union. Since February 10, 1986, one (1) employee has elected referral to the Employee Counseling Service under the terms of this agreement.

As recently as last month, the General Chairman of the Brotherhood of Locomotive Engineers has indicated an interest in negotiating a co-worker agreement for those employees represented by the Engineers. This offer to negotiate an agreement with the Engineers was initially extended by the Vice President-Labor Relations on February 24, 1986.

SENATOR LAUTENBERG: Does Amtrak have Operation Red Block or a comparable Rule G bypass program for dealing with alcohol and drug abuse?

ANSWER: We are not aware of whether Amtrak has an Operation Red Block or other comparable agreement.

CONRAIL OPERATIONS ON THE CORRIDOR

SENATOR LAUTENBERG: We have been told the original plan for the Northeast Corridor called for the separation of freight and passenger service. Amtrak and other parties continue to advocate removal of freight from passenger trackage in the Corridor. Has FRA done an analysis of this issue? What are your conclusions. Does freight service on the corridor pose a significant safety hazard in your judgment? Would dedicated, well separated rail lines for freight and passenger service be feasible? Would restricting freight operations to off-hours be workable?

ANSWER: Conrail has already removed substantial freight traffic from the Corridor. We expect to be able to remove more, but not all such traffic. Most remaining freight traffic moves during night hours, however all of it cannot.

SENATOR LAUTENBERG: Would you be willing to restrict the movement of hazardous material to one train movement in each direction a day?

ANSWER: In some segments of the Corridor this might be possible, if local freight trains are not included.

SENATOR LAUTENBERG: Would you be willing to operate with absolute blocks between interlockings and restricted to speeds not exceeding 30 miles per hour?

ANSWER: Except for piggyback (TV) trains, speeds might be limited to 30 MPH as an alternative to restricting the hours of movement.

SENATOR LAUTENBERG: Would Conrail be willing to pay a premium for movements during peak hours if it considered that movement essential as opposed to convenient? If not, why not?

ANSWER: No, there is no safety rationale for such a proposal.

SENATOR LAUTENBERG: Is Conrail conducting negotiations with other railroads to move its freight operations off the corridor? What is the status of those negotiations?

ANSWER: Conrail proposes to operate additional trains on CSX, in the area between Philadelphia and Washington, however CSX has not yet agreed to this.

Conrail has alternate routes of its own (for example, between Harrisburg and Northern New Jersey, Harrisburg and Philadelphia, or Philadelphia and Northern New Jersey) freight trains have been almost entirely diverted from the NEC. The few remaining trains, which operate principally during night hours, must run in the Corridor to fulfill service obligations.

Between Philadelphia and Washington, Conrail's alternatives involve either (a) CSX or (b) NS. The status of each of these is as follows:

(a) In 1986, Conrail diverted one daily train in each direction to the CSX (B&O) line between Philadelphia and Washington.

On January 22, 1987, Conrail asked CSX to permit operation of two additional daily trains in each direction. CSX acknowledged that these trains could be accommodated during daylight hours with no operating problems and indicated its intention to apply a per-car-mile charge which would be 10% greater than that presently paid by Conrail. However, CSX indicated that it was unwilling to commence this arrangement unless Conrail would agree to allow Chessie to operate certain new services over Conrail lines, under terms to which Conrail cannot subscribe.

Conrail is prepared to divert these two daily trains in each direction to the CSX line as soon as CSX is agreeable to accept them.

(b) Several years ago, when Southern Railway and Norfolk & Western sought authority to merge, they testified as to their intention to divert Conrail traffic away from Potomac Yard and the NEC and, instead, to use the Hagerstown Gateway. Existing Potomac Yard rates and divisions were to be preserved. However, NS never moved forward to implement this change.

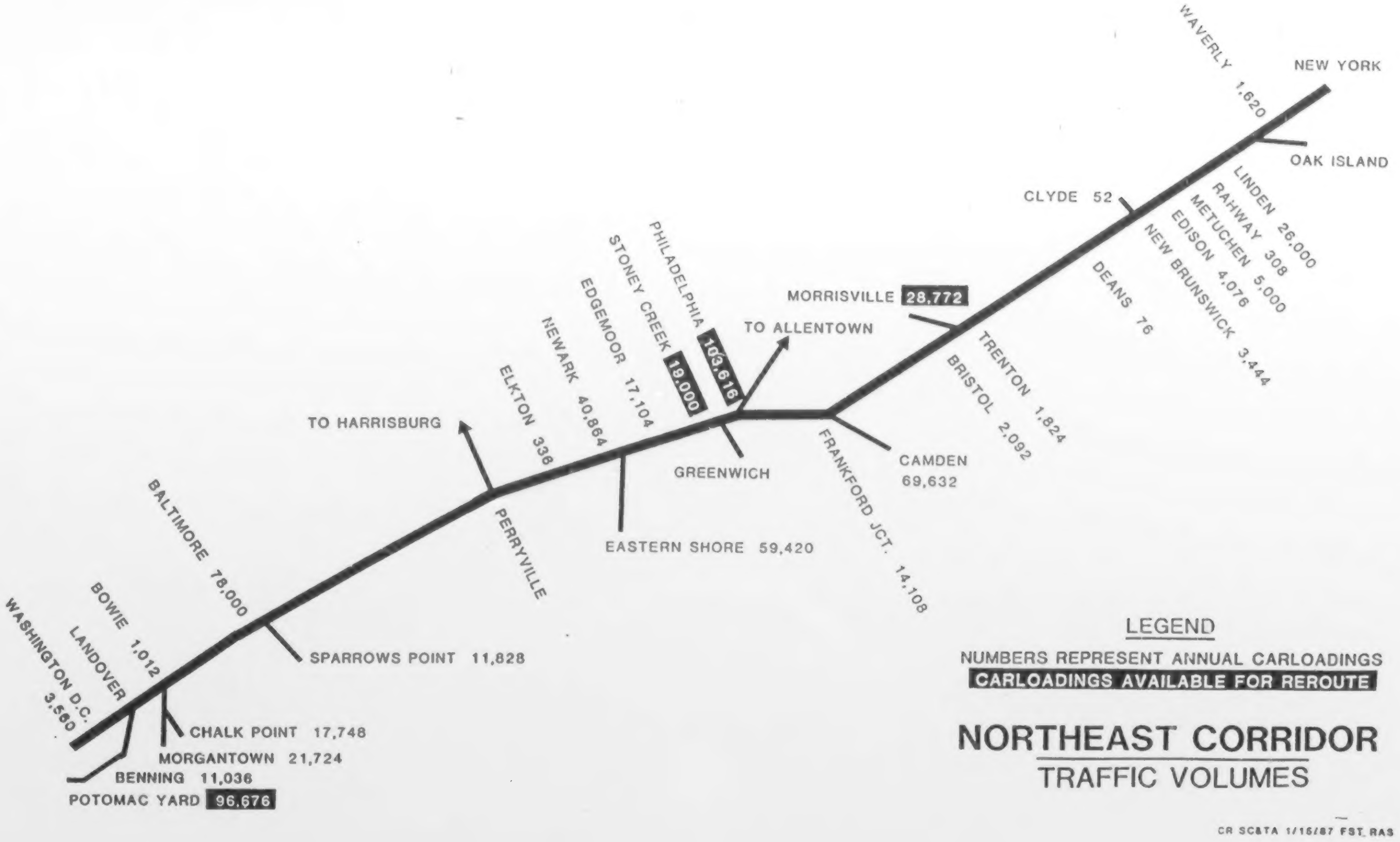
Subsequently, when NS sought to acquire Conrail, it again cited its intention to divert traffic away from Potomac Yard and the NEC, to the Hagerstown Gateway.

During the past six months, NS operating officers have made several inspection trips, via Hagerstown, including Conrail tracks to Harrisburg, PA. General agreement has been reached as to how run-through freight service can be established via this route, thus by-passing the NEC. However, there is no present indication as to when NS will make this change. Conrail is prepared to commence such operations at any time.

SENATOR LAUTENBERG: What are the average number of "through" daily freight train movements from Washington to Philadelphia? From Philadelphia to New York? From New York to Boston?

ANSWER: See diagram showing same.

(The information follows:)



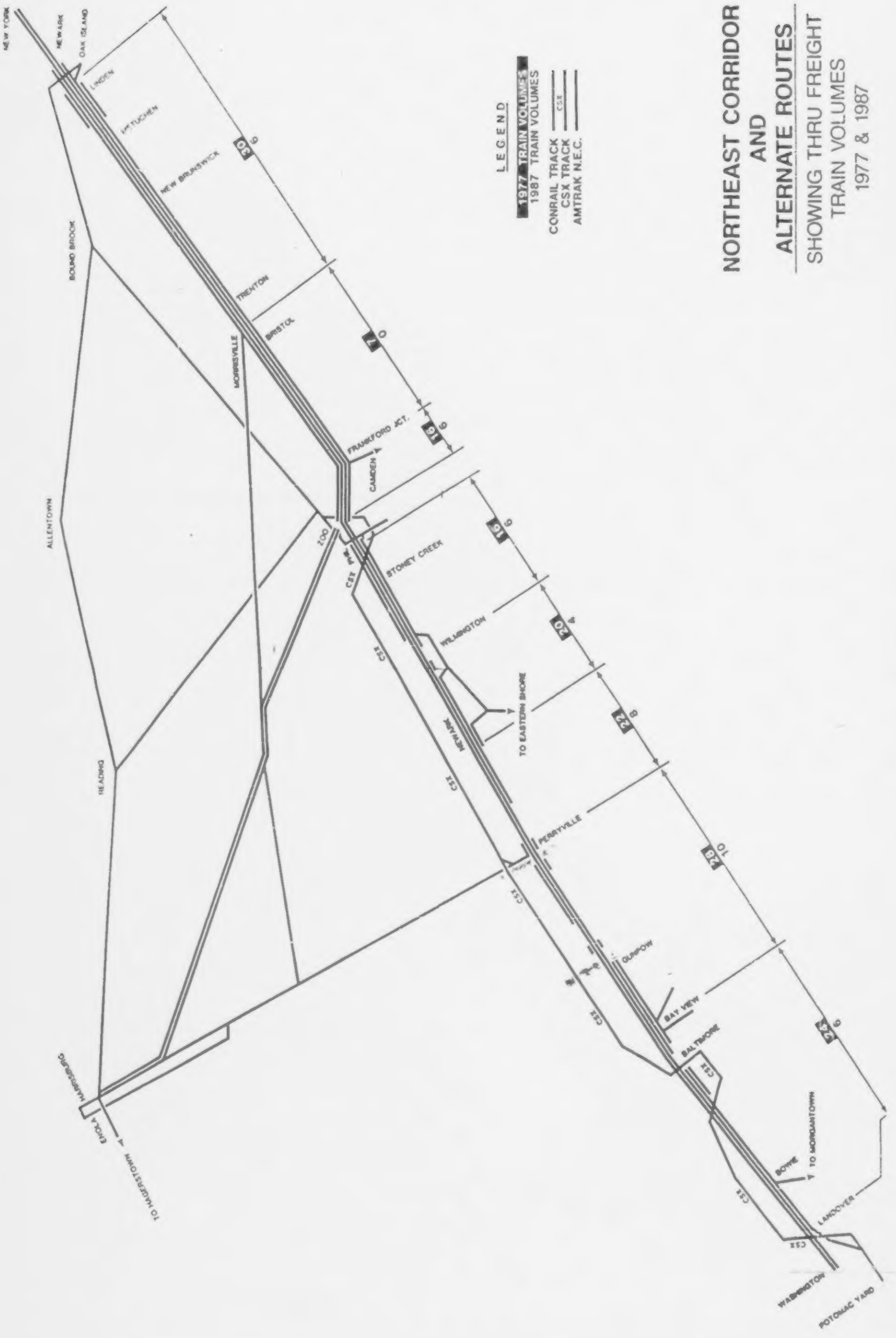
NORTHEAST CORRIDOR
TRAFFIC VOLUMES

LEGEND

NUMBERS REPRESENT ANNUAL CARLOADINGS

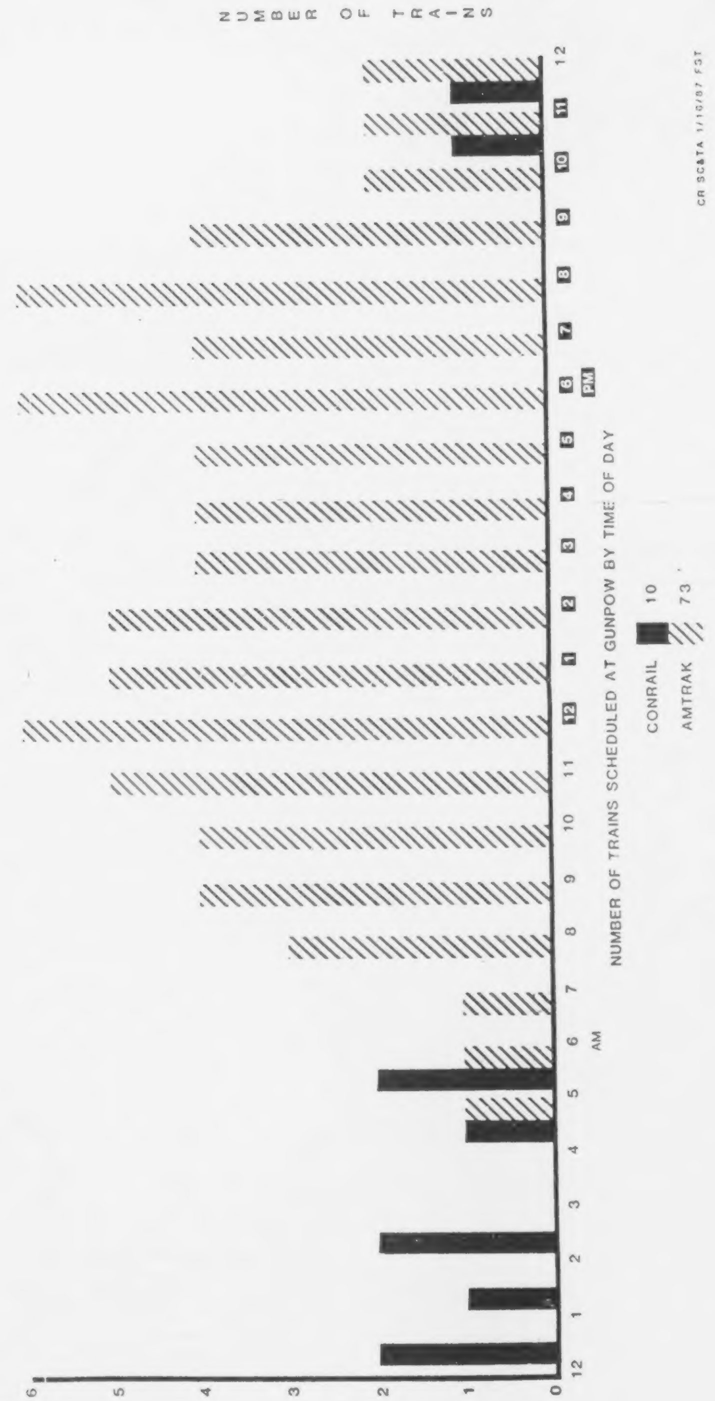
CARLOADINGS AVAILABLE FOR REROUTE

CR SC&TA 1/15/87 FST RAS



NORTHEAST CORRIDOR AND ALTERNATE ROUTES

SHOWING THRU FREIGHT TRAIN VOLUMES 1977 & 1987



CR SC&TA 1/16/87 FST

SENATOR LAUTENBERG: What is the average size of these movements? That is, the number of cars in a movement.

ANSWER: While "averages" can be misleading, the average through freight train size is about 80 cars, within the Northeast Corridor.

SENATOR LAUTENBERG: How often do these trains carry hazardous cargo?

ANSWER: Many of our freight trains on the Corridor include hazardous materials.

SENATOR LAUTENBERG: Are freight trains more prone to derailments than passenger trains?

ANSWER: Probably. Passenger train cars are designed and constructed so as to be as derailment-proof as possible.

SENATOR LAUTENBERG: Do freight trains have a greater incidence of serious mechanical malfunction than passenger cars?

ANSWER: Probably.

SENATOR LAUTENBERG: Does Conrail regularly move trains on the corridor simply because its convenient rather than essential?

ANSWER: No. In fact, Conrail has significant incentives to operate all possible trains via off-corridor routes. However such alternatives are not available in all cases.

SENATOR LAUTENBERG: Because of recent federal legislation, the Consolidated Omnibus Budget Reconciliation Act of 1985, Amtrak was able to renegotiate the rate it charges Conrail for track usage. What was that rate before the legislation and what is the new rate? How does that compare with the rates charged by other railroads to you for using their track, and how does that compare to what Conrail pays on other carrier's tracks?

ANSWER: The previous rate was $12 million per year, plus 12¢ per car-mile. The present rate is 52 1/2¢ per car-mile. This compares with the rate of 18¢ per car-mile, which Conrail charges many of its tenants. In this regard, it must be noted that Amtrak pays Conrail no trackage charge for the operation of Amtrak trains on Conrail's off-corridor routes (for example, Boston-Chicago, Harrisburg-Pittsburgh-Chicago, Toledo-Detroit-Chicago).

SENATOR LAUTENBERG: Amtrak has advocated removing freight from the Northeast Corridor. Would Amtrak be willing to reduce trackage use charges if Conrail moved during off-peak hours? If not, why not?

ANSWER: Conrail has received no such proposal from Amtrak.

SPEED ON THE CORRIDOR

SENATOR LAUTENBERG: Does this accident suggest that train time sheets be systematically monitored?

ANSWER: As the owner and operator of the Corridor, Amtrak has the prime obligation for monitoring all Corridor tenants. Conrail supervisors also check Conrail employees in the Corridor, however, in conjunction with other observations (for example when supervising a crew between Baltimore and Harrisburg).

SENATOR LAUTENBERG: Is excessive speed on the corridor the norm or the exception?

ANSWER: Amtrak monitors the performance of trains on the Corridor, including the speed, and advises Conrail of any rules violations. We have been made aware of no speed violations.

SENATOR LAUTENBERG: Do you routinely monitor the speed of trains (both freight and passenger) on the Corridor? How?

ANSWER: As explained previously, Amtrak has the prime obligation to monitor performance of all trains operated in its Corridor. However Conrail supervisors also check the performance of Conrail employees in the Corridor in conjunction with other observations.

NORTHEAST CORRIDOR IMPROVEMENT PROJECT

SENATOR LAUTENBERG: The original Northeast Corridor Improvement Project included a number of specific safety-related projects for which funds have not been requested. Which of these investments would do the most to improve safety in the Northeast Corridor? How many bridges on the NEC are presently subject to slow orders? Would centralized traffic control north of Philadelphia make a material difference in the safety of operation?

ANSWER: Conrail is not aware of any elements of the Northeast Corridor Improvement Program which were omitted, at the expense of safety.

NTSB RECOMMENDATIONS ON TRAIN CONTROL

SENATOR LAUTENBERG: On January 15, the National Transportation Board issued three recommendations:

(1) that all locomotive operating on the high speed trackage of the Northeast Corridor be equipped with automatic train control devices.

(2) that, in the interim, trains lacking automatic train control be required to stop before entry onto higher speed tracks regardless of signal indication and to request and receive permission before proceeding, and

(3) that all locomotives allowed to operate on the high speed trackage be required to have an operable radio capable of train-to-train and train to station communications.

ANSWER: (1) Automatic train control devices may be of significant importance for passenger trains operating at 100 MPH and greater speeds, however they are not essential for safe operation of slower speed freight trains. In fact, Conrail has concern about the safety of such systems on freight trains, because they require train air braking procedures which can create excessive coupler forces, resulting in freight trains buckling and derailing onto adjacent tracks. We are in discussions with Amtrak and the manufacturers of these devices, attempting to overcome these deficiencies.

(2) This proposal would contribute nothing to safety.

(3) Same as above. While radio is highly desirable, safety operations do not depend upon having a working radio.

SENATOR LAUTENBERG: Does FRA have the authority to require Amtrak to adopt them?

ANSWER: Presumably.

SENATOR LAUTENBERG: What would it cost to install automatic train controls on all locomotives operating on the NEC?

ANSWER: If such equipment can be purchased and installed for $30,000 per locomotive unit, Conrail's cost could run between $6 million and $60 million, depending upon whether 200 units were equipped, or whether the entire fleet of 2,000 road units were equipped. If only part of the fleet were equipped, locomotive utilization would suffer, because of inability to have all locomotives run through, as at present, to/from distant points beyond the Corridor.

SENATOR LAUTENBERG: NTSB recommended installation of automatic control devices in 1978 after the Seabrook accident. Why didn't FRA issue such a rule at that time? Do you agree that if such a rule had been in effect, the crash at Chase, Maryland would probably not have occurred?

ANSWER: Conrail has no position.

Passenger Safety

SENATOR LAUTENBERG: As a result of an Amtrak accident in Vermont in July 1984, the National Transportation Board (NTSB) made a number of recommendations, including:

replacing existing mirrors with shatterproof material;
redesigning and modifying coach and seatback cushions to prevent their becoming dislodged; and,
developing and installing effective retention devices on overhead luggage racks.

In the Chase, Maryland Accident, did injuries occur as a result of certain deficiencies in the passenger-car interior?

ANSWER: Conrail has no position.

SENATOR LAUTENBERG: What actions have been taken by either FRA or Amtrak to respond to the NTSB recommendations on passenger safety?

ANSWER: Conrail has no position.

SENATOR LAUTENBERG: In addition to these recommendations, have you ever investigated equipping passenger trains with seat belts?

ANSWER: Conrail has no position.

SENATOR LAUTENBERG: If not, does the Chase, Maryland accident suggest that such studies be undertaken?

ANSWER: Conrail has no position.

RAIL SAFETY - RAIL SAFETY RECOMMENDATIONS

SENATOR LAUTENBERG: If you were limited to making three recommendations for improving rail safety, what would they be?

ANSWER: My recommendations to improve rail safety would be as follows:

(1) Improve management's ability to monitor employee compliance with drug and alcohol regulations, by removing restrictions against blood and urine testing.

(2) Prohibit members of arbitration boards, handling labor grievances, from restoring to service any employees found to be in violation of alcohol and drug regulations.

(3) Modify cab signal equipment so as to replace the air-operated warning whistle with an electronic device which cannot be nullified by an unauthorized individual. Also have this device connected through the locomotive reverser so that it will sound only on the controlling locomotive -- thus reducing the temptation for individuals riding in non-controlling units from nullifying the warning device.

SAFETY PROCEDURES AND EQUIPMENT - COMPLIANCE

SENATOR LAUTENBERG: Who inspects the locomotive before it leaves the yard?

ANSWER: This practice varies by location. At locations where Mechanical Department personnel are assigned and on duty, they perform inspections of locomotives before departure from enginehouse facilities. At other points, such inspection is performed by the locomotive engineer who takes charge of the locomotive consist.

SENATOR LAUTENBERG: Can anyone inspect the locomotive? That is, what are the qualifications of the personnel that inspect the locomotive?

ANSWER: Locomotive inspections may be performed only by Mechanical Department personnel, or by locomotive engineers. Both such classes of employee are qualified to perform such inspections, as part of their qualification to hold such positions.

SENATOR LAUTENBERG: Who "walks the train" to make sure all cars are coupled and all the brake systems work?

ANSWER: At points where Car Inspectors are assigned and on duty, they perform the initial terminal inspections prescribed by Conrail and FRA Regulations. At other points (mainly outlying locations) inspections are performed by members of the train or yard crew which picks up the cars, for movement.

SENATOR LAUTENBERG: Who usually checks the cab signals?

ANSWER: This practice varies by location. At locations where Mechanical Department personnel are assigned and on duty, they perform inspections of locomotives before departure from enginehouse facilities. At other points, such inspection is performed by the locomotive who takes charge of the locomotive consist.

SENATOR LAUTENBERG: How often are cab signals, speedometers, radios and other equipment checked?

ANSWER: Equipment is checked at each dispatchment, or each 24 hours (except when said 24 hours occurs prior to arrival at final terminal). In addition, engineers constantly observe the operation of their locomotive units, and report problems which would interfere with their safe or effective performance.

SENATOR LAUTENBERG: What recourse does an engineer have is a locomotive doesn't have a slip certifying that all systems/equipment work?

ANSWER: In the event that an engineer discovers an unsafe or otherwise undesirable condition in his locomotive units, he is required to report that condition as soon as feasible.

SENATOR LAUTENBERG: Can an engineer refuse to leave the yard until all defects are corrected?

ANSWER: Engineers are not required to operate locomotives with safety defects.

SENATOR LAUTENBERG: Mr. Claytor, you attribute the wreck of the Colonial on January 4th to six successive rules violations by the crew of Conrail locomotives. All of these would ultimately have been neutralized if the Conrail engines had been equipped with automatic train control. Isn't that right? Why haven't you required automatic train control devices on all trains using the corridor's high speed trackage before now?

ANSWER: This is not a Conrail question.

SENATOR LAUTENBERG: The NTSB recommended that automatic train control devices be required on all trains operating in the corridor in 1978. Why wasn't that adopted then?

ANSWER: It is Conrail's opinion that speed control devices presently available are unsuitable for use on freight locomotives, for safety reasons.

SENATOR LAUTENBERG: It is the Committee's understanding that FRA is having a hearing on train radios the end of the month. Based on what you know today, what part did the radio communications play in this accident?

ANSWER: None, whatever.

SENATOR LAUTENBERG: Do you favor the January 15, 1987 NTSB recommendations regarding radios?

ANSWER: I do not favor the those recommendations. NTSB's January 15, 1987 recommendation regarding radios cannot be justified by safety considerations.

LICENSING

43 SENATOR LAUTENBERG: Is there a system for licensing engineers that run either passenger or freight trains? If not, why not? Should there be such a system?

ANSWER: There is no "licensing", as such, but employees receive extensive training, before being qualified as a locomotive engineer, for which they receive a certificate. This system is completely adequate to insure that engineers are qualified.

SENATOR LAUTENBERG: Who certifies that an engineer is qualified? Is it the responsibility of the carrier or the owner/operator of the track?

ANSWER: The engineer's employer normally certifies to his qualification as an engineer. However, before he can operate on another railroad, he must demonstrate his qualifications to that railroad.

SENATOR LAUTENBERG: Are there industry-wide standards on engineer qualifications? That is, does Conrail have the same standards ad Burlington Northern? If not, why not?

ANSWER: While standards are generally similar, they are not necessarily identical. The "qualification standards" for engineers vary somewhat from road to road, depending upon the physical characteristics of each road, its traffic patterns, equipment, etc. Generalized standards could be developed (by AAR, for example) but each user would have to be able to adjust them to its own special circumstances.

FEDERAL INSPECTORS

SENATOR LAUTENBERG: Are there enough Federal and State safety inspectors in the field? (325 Field inspectors total)

ANSWER: Yes.

SENATOR LAUTENBERG: Do inspectors interact with the engineers, brakemen, electricians, firemen, oilers and other train personnel regarding safety issues? If so, how?

ANSWER: They may, or may not -- depending upon when they perform their inspections.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

TRAIN CONTROL EXPENSE

SENATOR D'AMATO: Couldn't proceeds from the sale of Conrail be applied to finance the necessary investment in automatic train control? If not, please explain.

ANSWER: Presumably, through legislative action. Or, this could be funded by Amtrak, as a cost of having high-speed passenger operations in the Corridor.

HAZARDOUS MATERIALS

SENATOR D'AMATO: Please outline the extent to which Conrail moves hazardous materials in the Northeast Corridor.

ANSWER: While some hazardous materials move in the Northeast Corridor, it is not one of Conrail's major routes for such traffic.

SENATOR D'AMATO: What special handling is accorded to these movements, such as pre-embarking inspection and notification to local authorities?

ANSWER: Hazardous materials receive all pre-movement inspections and other requirements prescribed by Conrail's Hazardous Material Regulations, which fulfill or exceed FRA Regulations. Amtrak's Northeast Corridor Control Center is advised, in advance, of each train handling such materials.

SENATOR D'AMATO: Is special training required of Conrail personnel involved in the transportation of hazardous materials?

ANSWER: Conrail's Safety Department has performed extensive training of Conrail employees, as well as personnel of local Emergency Response groups along Conrail lines.

FREIGHT/PASSENGER

SENATOR D'AMATO: Please outline the implications of eliminating freight on the northeast corridor? Is such a diversion any more practical in other parts of the country, such as New York State?

ANSWER: Conrail has already diverted much through traffic from the NEC. Further diversions are possible, however the most significant of these require further operations over B&O trackage -- which B&O has been reluctant to expand upon, at present.

SENATOR D'AMATO: To what extent is Conrail locomotive equipment operated in New York, equipped with locomotive cab signals? Automatic train control? Since a good percentage of your locomotive fleet is signal equipped and runs over track providing signals, why not make the safety investment in automatic train control? Does Conrail have any statistics on the effectiveness or risk of derailment of automatic train control on which to base an acquisition decision?

ANSWER: Conrail's road freight locomotives are equipped with cab signals, however Conrail trackage is equipped with cab signals only on its Pittsburgh Line, and Port Road, Trenton, Enola and Conemaugh Branches. Automatic Train Control, in its present state, is not suitable for freight operations, for safety reasons.

OPERATING RULE VIOLATIONS

SENATOR D'AMATO: Mr. Claytor's statement points out the sequence of operating rule violations which led to the January 4th accident, beginning with the departure of the locomotive with faulty signal and whistle, through speed violations and inattention to signals. How commonplace are these practices, in your opinion, and what are you doing now to bring operating practices in line with safety rules?

ANSWER: We have been previously unaware of any cases in which locomotives were taken from their initial terminal with inoperative cab signal whistles -- a rule violation. While our Operating Rule Observation Program includes a specific observation for this pre-departure test, we have given it a lower priority than certain other tests -- in the belief that employees will seldom ignore devices which enhance their own safety. We plan to increase the number of such checks, however, in light of the January 4 incident. As far as speed is concerned, Conrail supervisory officers make numerous radar checks of train speeds on Conrail's own lines, which indicate that instances of excess speed are very rare, on Conrail lines.

NATIONAL TRANSPORTATION SAFETY BOARD

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

LICENSING

Senator Lautenberg: Is there a system for licensing engineers that run either passenger or freight trains? If not, why not? Should there be such a system?

Answer: At present, there is no system for licensing of passenger or freight locomotive engineers. The duties, responsibilities and qualifications for these positions have been derived through collective bargaining. The Safety Board has not taken a position on whether such a licensing system should be instituted. While such a system would provide the FRA with direct authority, it would also establish a cumbersome bureaucracy within an agency already overburdened. Any move to require licensing should be carefully researched and the benefits clearly defined.

Senator Lautenberg: Who certifies that an engineer is qualified? Is it the responsibility of the carrier or the owner/operator of the track?

Answer: The employing railroad determines the qualifications of a locomotive engineer.

Senator Lautenberg: Are there industry-wide standards on engineer qualifications? That is, does Conrail have the same standards as Burlington Northern? If not, why not?

Answer: While there are no industry-wide standards on locomotive engineer qualifications, there is a general uniformity within the rail industry on those qualifications.

Senator Lautenberg: Have you studied the possibility of common carrier licensing? If so, what were those findings?

Answer: The Safety Board has not performed such a study.

Senator Lautenberg: It is the Committee's understanding that the Brotherhood of Locomotive Engineers has suggested standard federal requirements for engineers. How does FRA feel about that?

Answer: The Safety Board has not been made aware of the FRA's position concerning standard federal requirements for locomotive engineers.

Senator Lautenberg: Has FRA in an official capacity responded to that suggestion?

Answer: The Safety Board is unaware of an official response.

CONFLICT OF INTEREST - NEED FOR COMMISSION

Senator Lautenberg: Do you believe that there exists a conflict of interest, with the FRA being a promoter of the railroad industry and at the same time the regulator of the industry?

Answer: This issue has been raised in some of the other modal administrations; specifically the Federal Aviation Administration and the Coast Guard. Certainly any agency tasked with dual responsibilities to promote and regulate an industry has the potential for conflict. Nevertheless, steps can and should be taken to reduce this potential by separating the functions and providing sufficient authority and resources to the safety function. Creation of the Safety Board took place partially as a safeguard against undue emphasis on promotion, and the system of checks and balances seems to work well as it is.

Senator Lautenberg: The distinguished Majority Leader and valued member of this Subcommittee, Senator Byrd, included in the 1987 continuing resolution an amendment establishing an "Aviation Safety Commission."

One of the reasons that Commission was called for centered on whether an agency with the dual responsibilities of promoting the commercial interests of an industry and ensuring safety could effectively perform the safety job.

I think FRA may be in an analogous situation. Would you support establishing a similar Commission on rail safety?

Answer: The Safety Board has not taken a position on the need for a commission on aviation safety or rail safety. Certainly, transportation safety is sufficiently important and complex that input from a variety of sources is always useful. Congressional oversight and authority is the greatest guarantee that the agencies are performing their intended functions, and if the Congress desires additional information, the Safety Board will certainly cooperate in that effort.

Senator Lautenberg: Another issue that Commission was to study was whether it is feasible to make mandatory some or all of the safety recommendations issued by the National Transportation Safety Board. Have you ever studied or estimated the feasibility of constituting all of NTSB's safety recommendation?

Answer: The Safety Board does not believe it would be in the best interest of safety to make its recommendations mandatory. This would, de facto, change the mission of the Safety Board from that of a watchdog for safety to a regulatory agency, thus eliminating its important characteristic -- objectivity.

CONRAIL OPERATIONS ON THE CORRIDOR

Senator Lautenberg: Are freight trains more prone to derailments than passenger trains? Do freight trains have a greater incidence of serious mechanical malfunction than passenger cars?

Answer: The Safety Board investigates rail accidents on a selective basis due to available resources within the Board, and therefore does not maintain an all-encompassing accident data base and reporting system. The data needed to properly answer these two questions is, however, reportable to the FRA. The FRA is in a much better position to answer.

FEDERAL INSPECTORS

Senator Lautenberg: Are there enough Federal and State safety inspectors in the field? (325 field inspectors total)

Answer: The Safety Board is concerned with the numbers of safety inspectors operating in the field and has addressed this concern to the FRA. In our "Safety Effectiveness Evaluation of the

Federal Railroad Administration's Hazardous Materials and Track Safety Programs," we recommended that the FRA expand the State Participation Program.

Senator Lautenberg: Do inspectors interact with the engineers, brakemen, electricians, firemen, oilers and other train personnel regarding safety issues? If so, how?

Do you believe that FRA has created an environment that allows or encourages train operation personnel to report safety violation to federal inspectors?

Answer: The Safety Board's interaction with the FRA and railroads has not provided us with an opportunity to evaluate these questions. However, the Safety Board has not learned in the course of its investigations that there are any particular problems with the interaction of FRA inspectors and railroad operating employees.

ALCOHOL AND DRUG REGULATION

Senator Lautenberg: Are the recently implemented FRA regulations to make ~~sure~~ personnel "under the influence" are stopped from going to work adequate?

Answer: The Safety Board does not have sufficient experience with the new regulation to respond at this point.

Senator Lautenberg: Do you have data on how many train crew personnel have been prevented from going on duty since the new regulations went into effect?

Answer: The Safety Board does not have these data. However, the FRA probably could provide the answer.

Senator Lautenberg: Can or do FRA inspectors check railroad train crews as they come on duty? Should FRA inspectors be involved in this type of monitoring?

Answer: It is not clear that FRA inspectors have such authority under the regulations. This is generally the objective and responsibility of the railroads. However, the FRA can and should check to ascertain that the railroads are doing this.

Senator Lautenberg: Do you believe FRA's Alcohol and Drug Rule needs to be modified in light of the recent accident? How?

Answer: Recent accident investigations involving impaired crewmembers raise questions in this regard. For instance, issues of timely taking of samples, testing of all appropriate employees and decisions to test based on the dollar value of accidents have been cited as potential problem areas in our investigation experience under the new regulations. Whether or not the difficulties being encountered are due to the inadequacy of the regulations or the inadequacy of the implementation of them is still a question. The Safety Board will continue to monitor this area very closely.

SAFETY PROCEDURES AND EQUIPMENT - COMPLIANCE

Senator Lautenberg: Following this accident the NTSB on January 15, 1987 recommended a number of regulations and requirements regarding radios. Are there federal requirements covering inter and intra-train communications?

Answer: No. FRA regulations govern the use of radios when they are installed. However, they do not require the installation or use of radios.

Senator Lautenberg: Are there federal rules governing radio usage for dispatching and controlling operations? Are there standards on the use of radio frequencies?

Answer: Assignments of radio frequencies are done under the authority of the FCC.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

DRUG USE IN TRANSPORTATION WORKFORCE

Senator D'Amato: This Subcommittee is concerned that no comprehensive and equitable program is in place to ensure that those entrusted with the traveling public's safety are unimpaired by drugs and alcohol. In your opinion, what steps need to be taken by the FAA, and Federal Railroad Administration, industry and Congress to develop a fair employee drug abuse program which will give citizens more confidence in the safety of our transportation systems?

Answer: The NTSB is continuing to look for additional solutions to the problem of alcohol and drug abuse in our nation's transportation system. However, the Safety Board has over the years issued a series of recommendations addressing the problem of alcohol and drug abuse in the various modes of transportation, and also has commented on pertinent rulemaking to the FAA and FRA. In general, the Board believes that an effective alcohol/drug abuse program in all commercial modes must screen prospective employees prior to employment, test for alcohol/drug use in conjunction with periodic physical examinations and for "just cause" or "reasonable suspicion" on the job, as well as after crashes or incidents. Critical to the integrity and effectiveness of any program are properly trained managers and supervisors capable of detecting possible alcohol and drug impairment, and a management system which provides close supervision of employees in safety sensitive positions.

Senator D'Amato: What improvements need to be made in the current Federal Railroad Administration regulation covering drug and alcohol abuse to channel problem employees to counseling?

Answer: The Safety Board is presently reviewing implementation of the FRA alcohol/drug regulations by the rail industry. We will be examining available FRA data, reviewing individual railroad programs and experience, and collecting information during the course of our own accident investigations. It is premature at this time to make any broad assessment of the FRA rule; however, several potential issues are apparent. First, because the key "for cause" testing provision is optional, most railroads have not adopted such a policy. Second, by limiting the applicability of the Rule to hours-of-service employees, many employees who also exercise safety-critical functions such as maintenance-of-way or mechanical workers are not subject to alcohol/drug testing. Third, the $500,000 damage threshold for accidents covered by the Rule may encourage an underevaluation of equipment by railroads to avoid or delay reporting accidents and to preclude testing of involved rail personnel. Given the rail industry's reluctance to go beyond (or even fully implement) the rule, any of these provisions limiting the applicability of the rule also limits opportunities to identify and refer for treatment employees with alcohol or other drug abuse problems. The Safety Board believes this serves neither the interests of public safety nor individual employee welfare.

The Board encourages the Committee to examine the alcohol and drug program adopted by the Southern Pacific Transportation Company, which appears to have successfully addressed these concerns.

Senator D'Amato: The current regulation provides for pre-employment testing. Since some have said that getting behind the throttle of an engine is easier than obtaining a driver's license, is the current system adequate?

Answer: Currently, railroads do not have equal or uniform employment standards. Railroads are not required to review an employee's state motor vehicle record or the National Driver Register on a pre-employment or periodic basis. In the Board's experience a motor vehicle record can prove to be quite relevant in assessing a crewmember's behavior in an accident. An individuals' failure to comply with motor vehicle laws, driving while intoxicated statutes in particular, can be indicative of certain behavioral traits and may suggest an underlying alcohol/drug abuse problem. The Safety Board believes that the motor vehicle record of prospective employees should be reviewed and considered along with other evidence in evaluating fitness for duty.

EQUIPMENT TAMPERING

Senator D'Amato: Equipment failures played a significant role in this accident. Yet we are informed that taped up alert whistles, faulty speedometers, and broken radio equipment are commonplace in the rail industry. What does this indicate about federal inspectors, industry and the employees themselves? How different is the rail industry from aviation and trucking in this respect? Would stiffer penalties to industry, or employee penalties reduce the incidence of faulty equipment?

Answer: The term "equipment failure," per se, indicates a malfunction of a mechanical or electrical device. There has not been evidence of that in the Chase accident. Rather, equipment was tampered with, thereby contravening the intent of that equipment; the equipment involved was the cab-control signal and cab signal warning whistle. With regard to what this indicates about federal inspectors, the tampering may indicate that those employees doing the tampering feel little risk of being caught. There is no reason to believe that anyone other than an employee would be doing the tampering. Whether harsher penalties would reduce the incidence of tampering would depend on the level of enforcement.

INSPECTION FORCE

Senator D'Amato: The federal rail inspection force has remained constant at 325 for the last several years. When was the last time the Safety Board assessed the adequacy of that level to cover the nation's 265,000 miles of track, 23,000 locomotives and hundreds of signal systems?

Is this workforce balanced as to geography and volume of rail traffic? Are more inspectors needed in the northeast corridor?

Answer: The Safety Board does not have the staff resources necessary to perform a review to determine the adequacy of the inspection force of FRA relative to the nation's railroads, and consequently has not performed such a review.

INSPECTION WORKFORCE

Senator D'Amato: In the past, the Board has criticized the aviation inspector workforce. Does the Board believe the rail inspection workforce does a thorough, impartial job inspecting the industry? Does FRA ensure that its inspectors focus on significant safety violations, and do follow-up checks for compliance?

Answer: The Safety Board has no reason to believe that the vast majority of individual FRA inspectors do not perform their tasks in a diligent manner. Whether FRA ensures that it's inspectors focus on significant safety violations and perform follow-on inspections can best be answered by the FRA.

Senator D'Amato: Why aren't locomotive equipment records required as is the case in the airline industry? What assurance does a locomotive engineer really have that the equipment he is asked to operate is in fact thoroughly inspected and properly equipped?

Answer: Locomotive equipment maintenance and inspection records are kept by the individual railroads. Federal regulations mandate certain maintenance and inspection procedures to assure the safety of certain locomotive appliances.

CONCLUSION OF HEARING

Senator LAUTENBERG. With that we conclude the subcommittee hearing.

[Whereupon, at 2:30 p.m., Tuesday, January 20, the subcommittee was adjourned, to reconvene at the call of the Chair.]

MATERIAL SUBMITTED SUBSEQUENT TO THE HEARING

[CLERK'S NOTE.—Subsequent to the hearing, the following letters and statements were submitted for the record:]

Letter From Senator Specter

The Honorable Frank Lautenberg
Committee on Appropriations
Subcommittee on Transportation
United States Senate
Washington, D.C. 20510

January 29, 1987

Dear Senator Lautenberg:

I am writing to your Committee, in the wake of the tragic collision between an Amtrak passenger train and a Conrail freight train, to ask you to include in your hearing record the attached statement by Mr. Rick Geist, a Member of the Pennsylvania House of Representatives and Chairman of the High Speed Rail Association.

Representative Geist was not able to present testimony at your hearing on January 20 but I believe it is important that the Committee give strong consideration to his proposal. As he points out, high speed rail projects promise not only fast and safe transportation but also enormous economic development and growth.

Thank you for your attention to this matter.

Sincerely,

Arlen Specter

Statement of Hon. Richard A. Geist, Member, Pennsylvania House of Representatives; Chairman, Pennsylvania High Speed Rail Commission; and Chairman, High Speed Rail Association

The High Speed Rail Association, founded in 1983, is devoted to exploring and advancing the design, development, construction and use of high speed rail passenger transportation. Among its members are the representatives of the financial community, the engineering and design profession, academia, labor unions, the construction industry, rail equipment manufacturers, material suppliers, service providers, and national, state and local government officials.

HSRA serves as a forum not only for an exchange of information and ideas among various parties having a stake in high speed rail, but also as an organization that studies and recommends professional practices to be following in areas such as safety design and ridership market forecasting.

Like similar state agencies in Florida, Michigan, New York and Ohio, and a city agency in Nevada, the Pennsylvania Commission is studying the feasibility of a 180-to 250-mph passenger railroad linking major cities, modeled after the successful high speed trains of Japan and Europe. In the Pennsylvania Commission's case, the route being studied is Pittsburgh-Harrisburg-Philadelphia, with stops in Greensburg, Johnstown, Altoona, State College and/or Lewistown, Lancaster and the Paoli area.

As a result of the tragic Conrail-Amtrak accident January 4, many Americans may have a misconception about the safety of high speed trains. The fact is that true high speed trains, as operated in France and Japan, have been 100 per cent safe.

In fact, 23 years' worth of Japan's 130 mph bullet train service proves that true high speed railroading systems provide the safest transportation service known to man.

The problem in America is that we do not have a true high speed railroad, although at least 13 states are planning to build their own systems.

Although many Americans will be amazed to hear it, the Amtrak train going 100 mph was not a true high speed train. Americans are also unaware that ordinary run-of-the-mill trains in Europe now travel well over that speed, up to 125 mph. The railroad trade press considers any operation at 200 kilometers an hour (125 mph) and faster to be "high speed" rail. Amtrak recently raised the speed limit on certain selected stretches of its Northeast Corridor line to 125 mph.

At this time, there are only two true high speed trains, i.e., the TGV in France and the Japanese Bullet Train, although new systems are being developed in other countries, particularly Germany.

The Japanese National Railroad's Bullet Train system has carried more than 2 billion passengers without a single passenger fatality or injury. JNR operates the Bullet Trains on passenger-only trackage.

The same condition prevails in France, where the TGV passenger trains operate at 170 mph in normal, everyday service over passenger-only trackage, and at lesser speeds of 100-125 mph on mixed-usage tracks, with sophisticated signal and control systems. The TGV, which entered full high-speed service in 1983, also has a perfect safety record.

The perfect safety record of these trains is the result of several factors. For one, they generally operate at their highest speeds only on trackage dedicated to passenger trains exclusively. Second, sophisticated computer train controls provide a crucial back-up to the trains' human operators. Of course, considerable attention is given to car-coupling devices, track structures, curve and grade limits, stress requirements, crashworthy construction, and other such factors.

In addition to safe transportation, high speed trains will bring other benefits to America, too.

For example, they offer additional transportation options for the nation's business and other travelers. They assure a tremendous burst of economic development. And, as has been true for every other significant transportation development, they offer the longer-run promise of increased economic activity and health wherever they are in place. Of course, the job-creation potential is enormous.

None of this should be construed as criticism of Amtrak, which has neither the mandate nor the money to provide true high speed trains.

While true high speed systems are 100 percent safe, Amtrak's overall safety record is the highest in our railroad industry*, and Amtrak, at present, is the safest form of travel in America today.

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* According to the Federal Railroad Administration in 1986, it was 1.84 accidents per million traffic miles, compared with 4.55 for the entire U.S. railroad industry.

ANSWERS OF NATIONAL ASSOCIATION OF RAILROAD PASSENGERS TO SUBCOMMITTEE QUESTIONS

Submitted Feb. 3, 1987, by NARP Executive Director Ross Capon, 236 Massachusetts Ave., NE, Suite 603, Washington, DC 20002. 202/546-1550.

Deficiencies in Passenger-Car Interior--Chase, MD

We cannot add information beyond that supplied by the passengers and other witnesses who testified Jan. 20.

Seat Belts

We have not investigated equipping passenger trains with seat belts. We are skeptical that seat belts would be cost-effective. Automobiles have seat belts primarily to prevent people from being ejected from the vehicle; airplanes have seat belts primarily to keep people from hitting the ceiling during turbulence; comparable conditions do not exist on trains.

One of the main attractions of trains is the ability to move around. On the airplane, the seatbelt signs are on at specific, limited times: takeoffs, landings, and during turbulence, presumably the times of greatest danger. On the train, the comparable time would be hard to pick. "Montrealer" was going only 59 mph at the time of its 1984 wreck, so one might argue that seatbelts should be worn at virtually all times when the train is not in stations--something which would be difficult to enforce, and which to our knowledge even the NTSB has never recommended.

Moreover, recent highway safety reports apparently indicate that one is safer in the back seat of an automobile with no seatbelt than with a lap belt only. If the same principle applied on a train, we might be talking about shoulder belts, where installation costs would be even higher and consumer acceptance lower.

FRA Enforcement Authority

FRA should be given authority to impose penalties directly on individual railroad employees for disabling safety devices and for violating other safety regulations. Disabling a safety device--and other serious safety violations--should be made a criminal offense.

At the same time, we question whether it is still necessary to assault employees with 1920's technology (the cab whistle that employees hate). Although the future may bring a sophisticated device that does not require an employee's frequent acknowledgement, it should be possible now to provide an effective (electronic?) alarm which is more pleasant--and less likely to be disabled--than the whistle.

Rail Safety Recommendations

In connection with the Chase, MD, wreck, our three recommendations would be:

a. For all trains operating on the Northeast Corridor mainline, require automatic speed control to assure that brakes are applied whenever an engineer fails to respond to signals instructing him/her to slow down or stop.

b. Remove as much through freight as possible from the NEC mainline.

c. Provide FRA and railroad companies access to the National Driver Register and to changes in driving records. Maryland's Mass Transit Administration, which operates Baltimore's subway and bus system, will not hire employees with more than 3 moving violations, and has an arrangement with the State Highway Administration under which MTA is notified of changes in MTA employees' driving records, which trigger an automatic review of the employee's status.

Alcohol and Drug Regulation

FRA's Alcohol and Drug Rule should be altered to permit random drug testing. Clearly, the nature of drug influence is such that observation of an individual does not reliably tell whether they are under the influence. Conrail Senior Vice President Richard Hasselman testified that Conrail supervisory personnel observed Mr. Gates when he reported for work and again after the accident and noted nothing amiss in his behavior, yet Amtrak President Claytor seems convinced that "impairment" is the only way to explain Gates' actions.

Indeed, drug influence from a given useage can go away and return without predictability. There are reports from airline pilots who have been terrified by the random resurgence of drug effects during flight.

Another reason for random testing might be the unwillingness of certain supervisors to do "reasonable suspicion" testing.

Obviously, the unions hope that courts will not uphold random testing, but regulatory authorities should not use that hope as an excuse for inaction, particularly in light of the "Colonial" wreck and the Dec. 10 SEPTA commuter railroad collision that injured 45 people and in which 3 of 6 crew members tested positive for cocaine. Even if the courts, and ultimately the Supreme Court, were to throw out random testing, they presumably would offer some guidance as to what measures could be adopted that would be both constitutional and more stringent than those currently in force.

As noted in our "Safety Recommendation c." above, we believe that information about driver offenses including those related to alcohol or drugs should be available to FRA and the railroad companies, and we think Maryland MTA has a good system for getting and using the information. Information about other drug/alcohol-related offenses would certainly be useful. All of this information is helpful in making a general determination about whether an employee is fit to work, rather than specifically for administering by pass agreements.

Conflict of Interest

The type of "conflict of interest" we most worry about relates not to the administration's role as "a promoter of the railroad industry" but as the promoter of a budget that would force Amtrak to cease operations. We worry that an adminstration advocating zero funding for Amtrak might have an incentive to oppose safety enhancements for which Amtrak or the federal government might have to pay.

We certainly would not oppose establishing a commission on rail safety. At the same time, we think the most enlightening answer to the question of whether or not such a commission is needed would be an examination of the list of NTSB recommendations which NTSB considers to have an "unsatisfactory" status, and their estimated costs.

We have not studied or estimated the feasibility of mandating all NTSB safety recommendations. We think there is some benefit to having an agency make recommendations without being responsible for paying for them. We worry that, if NTSB gained the ability to impose its recommendations, pressures would be brought to bear that might eventually limit NTSB's usefulness and its ability to "call the shots" as it sees them.

STATEMENT OF ALAN DUSTIN, VICE PRESIDENT AND GENERAL MANAGER, NEW JERSEY TRANSIT RAIL OPERATION, INC.

INTRODUCTION

THANK YOU MR. CHAIRMAN FOR THE OPPORTUNITY TO JOIN IN THESE IMPORTANT AND SERIOUS PROCEEDINGS. ON BEHALF OF YOUR CONSTITUENTS IN NEW JERSEY, I WOULD LIKE TO CONGRATULATE YOU ON YOUR LEADERSHIP OF THIS SUBCOMMITTEE. YOU BRING TO IT A NATIONAL CONCERN FOR AN IMPROVED, CAPABLE AND SAFE TRANSPORTATION SYSTEM.

NJT RAIL IS A SUBSIDIARY OF NEW JERSEY'S STATEWIDE PUBLIC TRANSIT CORPORATION, NEW JERSEY TRANSIT. ON JANUARY 1, 1983, NJT RAIL ASSUMED COMMUTER RAIL SERVICE WHICH HAD BEEN PROVIDED UNDER CONTRACT TO THE STATE OF NEW JERSEY BY CONRAIL. TODAY, WE PROVIDE 605 TRAINS, ON 11 LINES, EACH WEEK DAY, CARRYING ABOUT 165,500 DAILY ONE-WAY PASSENGER TRIPS TO DESTINATIONS IN NEW JERSEY AND NEW YORK. OF THIS DAILY ACTIVITY, WE PROVIDE SERVICE ON THREE LINES USING THE NORTHEAST CORRIDOR. OUR RARITAN VALLEY (54 TRAINS, AND 12,600 TRIPS) AND NORTH JERSEY COAST LINE (63 TRAINS AND 30,300 TRIPS) TRAINS ENTER THE CORRIDOR AT HUNTER INTERLOCKING IN NEWARK, NEW JERSEY AND UNION INTERLOCKING IN RAHWAY, NEW JERSEY RESPECTIVELY. OUR NORTHEAST CORRIDOR LINE TRAINS (96 TRAINS AND 54,000 TRIPS) ARE ENTIRELY ON THE CORRIDOR PROVIDING COMMUTER SERVICE FROM TRENTON TO NEWARK AND NEW YORK CITY. THE NORTHEAST CORRIDOR IS USED BY 35% OF OUR TRAINS, AND REPRESENTS 59% OF THE TRIPS WE CARRY DAILY. ATTACHED IS A SCHEMATIC MAP OF THE NJT RAIL SYSTEM.

NJT RAIL USES THE NORTHEAST CORRIDOR UNDER CONTRACTUAL ARRANGEMENTS WITH AMTRAK. THESE ARRANGEMENTS COVER THE SERVICES RENDERED BY AMTRAK AND THE PAYMENTS MADE BY NJT RAIL. AMTRAK PROVIDES ALL DISPATCHING, SIGNALS AND CONTROLS, MAINTENANCE OF WAY, ELECTRIFICATION AND ELECTRIC POWER TO NJT RAIL TRAINS. NJT RAIL TRAINS ARE OPERATED BY NJT RAIL ENGINEERS, CONDUCTORS AND TRAINPERSONS WHO ARE SUBJECT TO AMTRAK OPERATING RULES AND

REGULATIONS WHILE OPERATING ON THE CORRIDOR. SOME NJT RAIL LOCOMOTIVES AND CARS ARE NOW MAINTAINED BY AMTRAK, ALTHOUGH WE ARE BUILDING A NEW RAIL EQUIPMENT MAINTENANCE FACILITY IN KEARNY, NEW JERSEY, WHICH WILL BE FULLY FUNCTIONAL BY THIS SUMMER. AT THAT TIME WE WILL BE RESPONSIBLE FOR NEARLY ALL OF OUR OWN LOCOMOTIVE AND PASSENGER CAR MAINTENANCE.

WE HAVE EXPERIENCED DRAMATIC GROWTH IN OUR SERVICES. SINCE 1983, WE HAVE ADDED NINETEEN (19) WEEKDAY TRAINS AND OVER 24,000 WEEKDAY TRIPS TO NORTHEAST CORRIDOR OPERATIONS, AN INCREASE IN RIDERSHIP OF OVER 30%. WE ARE PROJECTING CONTINUING INCREASES IN THE FUTURE AND ARE NOW CONDUCTING A SERIES OF STUDIES WHICH WILL ASSIST US IN CHOOSING FUTURE SERVICES TO MEET GROWING DEMAND FOR TRAVEL TO AND FROM NEWARK AND NEW YORK. A CRITICAL ELEMENT IN THESE STUDIES IS A JOINT ANALYSIS WITH AMTRAK OF THE SPECIFIC INVESTMENTS WHICH WILL BE REQUIRED TO SAFELY INCREASE THE CAPACITY OF THE NORTHEAST CORRIDOR BETWEEN NEWARK AND NEW YORK CITY. IN NEW JERSEY, THE CORRIDOR IS A HIGH DENSITY, HIGHSPEED MIXED INTERCITY PASSENGER, COMMUTER PASSENGER AND FREIGHT RAILROAD. THERE IS NO DOUBT THAT IT WILL CONTINUE TO BE A HIGH GROWTH RAILROAD AS STEPS ARE TAKEN TO USE IT EVEN MORE EFFECTIVELY AND SAFELY TO TRANSPORT INCREASING NUMBERS OF NEW JERSEY PASSENGERS BOTH INTER AND INTRA STATE.

SAFE OPERATIONS

NJT RAIL OPERATES A SAFE PASSENGER RAILROAD. THROUGHOUT OUR ENTIRE SYSTEM WE HAVE ORGANIZED A CONTINUOUS AND INTENSIVE SERIES OF SAFETY PROGRAMS AIMED AT PREVENTING AND REDUCING INCIDENTS WHICH MAY ADVERSELY AFFECT OUR PASSENGERS AND EMPLOYEES. THESE INCLUDE THE PUBLICATION AND DISSEMINATION OF SAFETY RULES, EMPLOYEE TRAINING, EMPLOYEE OBSERVATIONS, PROCEDURES FOR EMPLOYEE QUALIFICATION, SAFETY MEETINGS AMONG SUPERVISORS AND WORKERS, INCIDENT INVESTIGATIONS AIMED AT PREVENTION AND ELIMINATION OF HAZARDS, AS WELL AS DRUG AND ALCOHOL PROGRAMS. WE HAVE AN ACTIVE SAFETY STAFF

CHARGED WITH INDEPENDENT REVIEW OF ALL OF OUR OPERATIONS. MY WEEKLY STAFF MEETINGS BEGIN WITH A REVIEW OF ALL INCIDENTS, AND A CONSISTENT REMINDER TO THE ENTIRE MANAGEMENT TEAM THAT THE SAFETY OF OUR PASSENGERS AND EMPLOYEES IS OUR FIRST PRIORITY.

ON THE NORTHEAST CORRIDOR, WE WORK CLOSELY WITH AMTRAK AT EVERY LEVEL OF BOTH OF OUR ORGANIZATIONS TO ASSURE THAT WE OPERATE SAFELY. OUR COMMUNICATIONS ARE OPEN AND ACTIVE, AND WE METICULOUSLY COMPLY WITH ALL OPERATING AND SAFETY RULES.

QUALIFICATIONS

EXPERIENCED ENGINEERS WHO COME TO US FROM OTHER RAILROAD PROPERTIES AND WHOM WE HIRE AFTER A CLOSE SCREENING MUST GO THROUGH AN INTENSIVE NINE (9) WEEK TRAINING PROGRAM WHICH INCLUDES EQUIPMENT FAMILIARIZATION, INSTRUCTION ON NJT RAIL'S, AMTRAK'S, AND CONRAIL'S OPERATING AND SAFETY RULES, AND AN INTENSIVE RIDING PROGRAM TO FAMILIARIZE EMPLOYEES WITH THE PHYSICAL CHARACTERISTICS OF OUR LINES. IN ORDER TO COMPLETE THE PROGRAM AND BE QUALIFIED, THE EMPLOYEE MUST PASS A WRITTEN EXAMINATION ON NJT RAIL'S, AMTRAK'S AND CONRAIL'S OPERATING AND SAFETY RULES, AND AN ORAL EXAMINATION BY NJT RAIL SUPERVISORS ON THE PHYSICAL CHARACTERISTICS OF THE LINES. ALTHOUGH WE HAVE NOT YET HIRED INEXPERIENCED ENGINEERS, WE HAVE DEVELOPED A 52 WEEK PROGRAM DESIGNED TO TRAIN INDIVIDUALS FOR THE POSITION OF LOCOMOTIVE ENGINEER. THIS PROGRAM INCLUDES 19 WEEKS OF RIGOROUS CLASSROOM INSTRUCTION IN THE AREAS OF AIR BRAKE EQUIPMENT; OPERATING RULES; ELECTRIC AND DIESEL--ELECTRIC LOCOMOTIVE SYSTEMS; MULTIPLE UNIT EQUIPMENT; EQUIPMENT TROUBLESHOOTING; AND LOCOMOTIVE INSPECTION. THOSE TRAINEES WHO ACHIEVE PASSING GRADES IN THIS PART OF THE PROGRAM MOVE AHEAD TO AN INTENSIVE 33 WEEK PHASE OF ON-THE-JOB TRAINING DURING WHICH THEY LEARN AND ARE QUALIFIED ON THE PHYSICAL CHARACTERISTICS OF OUR SYSTEM AND RECEIVE EXTENSIVE TRAINING IN TRAIN HANDLING UNDER THE SUPERVISION OF EXPERIENCED LOCOMOTIVE ENGINEERS.

TRAIN CREW (TRAIN PERSONS AND CONDUCTORS) ARE SUBJECT TO A SIMILAR TRAINING AND INSTRUCTION PROGRAM INCLUDING A TWO STEP PROCESS WHICH QUALIFIES THEM FIRST AS A TRAIN PERSON, THEN A CONDUCTOR. EACH STEP REQUIRES MORE EXPERIENCE, TRAINING, AND THE PASSING OF WRITTEN EXAMINATIONS. PROMOTION TO A CONDUCTOR CAN OCCUR WHEN THE INDIVIDUAL HAS COMPLETED AT LEAST 200 WORK DAYS, HAS HAD AN INTENSIVE OPERATING AND SAFETY RULES CLASS, HAS PASSED AN INTENSIVE WRITTEN EXAMINATION ON NJT RAIL'S, AMTRAK'S AND CONRAIL'S OPERATING AND SAFETY RULES, AND HAS QUALIFIED ON THE PHYSICAL CHARACTERISTICS OF THE RAILROAD BY OBSERVATION AND AN ORAL EXAMINATION.

ENGINEERS, CONDUCTORS AND TRAIN PERSONS ARE CLOSELY SUPERVISED BY NJT RAIL ROAD FOREMEN, TRAINMASTERS, AND OTHER MANAGEMENT PERSONNEL.

IN 1983, NJT RAIL, WORKING WITH THE APPROPRIATE UNIONS, DECIDED TO USE A WRITTEN EXAMINATION ON RULES RATHER THAN THE ORAL EXAMINATION USED BY ITS PREDECESSORS.

SAFETY EQUIPMENT

AUTOMATIC TRAIN CONTROL

THE NORTHEAST CORRIDOR AND THE NORTH JERSEY COAST LINE HAVE A SIGNAL SYSTEM WHICH ENABLES THE USE OF AUTOMATIC TRAIN CONTROL (ATC) EQUIPMENT. ATC ASSURES THAT THE TRAIN OPERATES AT THE CORRECT SPEED. WITH ATC, THE CONTROL CAB SIGNALS ARE USED IN CONJUNCTION WITH THE WAYSIDE SIGNALS AT ALL TIMES. ATC REQUIRES THE ENGINEER TO MAKE AN IMMEDIATE APPLICATION OF THE BRAKES WHENEVER THE SIGNAL IS CHANGED TO A MORE RESTRICTIVE INDICATION AND THE CURRENT SPEED OF THE TRAIN IS GREATER THAN THE SPEED PERMITTED BY THAT SIGNAL INDICATION. ATC HAS AN AUDIBLE WARNING DEVICE THAT MUST BE ACKNOWLEDGED BY THE ENGINEER BY PRESSING A BUTTON AS HE IMMEDIATELY REDUCES SPEED. IF THE OPERATOR DOES NOT ACKNOWLEDGE THE SIGNAL AND

REDUCE SPEED WITHIN 6 (SIX) SECONDS, THE ATC WILL AUTOMATICALLY APPLY THE BRAKES AND BRING THE TRAIN TO A FULL STOP.

AUTOMATIC TRAIN STOP

AUTOMATIC TRAIN STOP (ATS) IS A FEATURE WHICH IS ALSO ENABLED BY THE SIGNAL SYSTEM ON THE NORTHEAST CORRIDOR AND THE NORTH JERSEY COAST LINE. ATS, HOWEVER, SIGNALS THE ENGINEER THAT A SPEED REDUCTION IS REQUIRED, BUT DOES NOT ASSURE THAT THE TRAIN IS OPERATING AT THE PROPER SPEED. WITH ATS, THE CONTROL CAB SIGNALS ARE USED IN CONJUNCTION WITH THE WAYSIDE SIGNALS AT ALL TIMES. ATS ALSO PROVIDES AN AUDIBLE WARNING WHEN THE SIGNAL IS CHANGED TO A MORE RESTRICTIVE INDICATION. THE OPERATOR MUST ACKNOWLEDGE THE AUDIBLE SIGNAL BY DEPRESSING A FOOT PEDAL WITHIN 6 (SIX) SECONDS. IF THE WARNING DEVICE IS NOT ACKNOWLEDGED THE ATS WILL AUTOMATICALLY APPLY THE BRAKES AND BRING THE TRAIN TO A FULL STOP. THIS SYSTEM, HOWEVER, DOES NOT ASSURE THAT THE TRAIN SPEED IS REDUCED AS REQUIRED BY THE SIGNAL INDICATION.

EQUIPMENT

THE NJT RAIL FLEET WHICH OPERATES ON THE NORTHEAST CORRIDOR IS EQUIPPED EITHER WITH AUTOMATIC TRAIN STOP OR AUTOMATIC TRAIN CONTROL. BECAUSE OF VARYING OPERATING REQUIREMENTS AND TRAFFIC DENSITIES OTHER NJT RAIL LINES (WITH THE EXCEPTION OF THE NORTH JERSEY COAST LINE) ARE NOT EQUIPPED WITH ATC ENABLING SIGNAL SYSTEMS. PLANS FOR EQUIPPING ALL VEHICLES WITH ATC HAVE BEEN MADE TO PERMIT THE FLEXIBILITY OF ASSIGNING ANY EQUIPMENT TO THE NORTHEAST CORRIDOR. ALL NJT RAIL VEHICLES WHICH ARE CURRENTLY ON ORDER OR WILL BE ORDERED IN THE FUTURE WILL BE EQUIPPED WITH ATC. ALL NJT RAIL EQUIPMENT ON THE NORTHEAST CORRIDOR WILL BE ATC EQUIPPED BY 1991. ALL OF NJT RAIL'S DIESEL AND ELECTRIC LOCOMOTIVES AND CAB CARS WHICH OPERATE ON THE NORTHEAST CORRIDOR ARE ALREADY ATC EQUIPPED. THE ONLY NJT RAIL EQUIPMENT OPERATING ON THE CORRIDOR WHICH DOES NOT HAVE AUTOMATIC TRAIN CONTROL IS THE 300 ELECTRIC MULTIPLE UNIT SELF-

PROPELLED CARS. THESE VEHICLES ALL HAVE AUTOMATIC TRAIN STOP. THE COST OF EQUIPPING OUR FLEET WILL BE APPROXIMATELY $6 MILLION. THIS PROJECT AND OTHER SAFETY INVESTMENTS REQUIRED ON THE NORTHEAST CORRIDOR SHOULD BE FUNDED FROM A SPECIAL NORTHEAST CORRIDOR SAFETY APPROPRIATION.

NORTHEAST CORRIDOR OPERATIONS

THREE NJT RAIL LINES USE THE NORTHEAST CORRIDOR. ON THE RARITAN VALLEY LINE TWENTY-SEVEN (27) TRAINS PER DAY MOVE EASTBOUND TOWARDS NEW YORK FROM NJT RAIL CONTROLLED TERRITORY TO CONRAIL CONTROLLED TERRITORY ON THE LEHIGH VALLEY LINE BETWEEN CRANFORD AND NEWARK AND THEN TO AMTRAK CONTROL ON THE NORTHEAST CORRIDOR AT HUNTER INTERLOCKING IN NEWARK, NEW JERSEY, FOR APPROXIMATELY TWO (2) MILES TO A FINAL STOP AT NEWARK PENN STATION.

ALL OF THESE TRAINS ARE EQUIPPED WITH DIESEL LOCOMOTIVES, CAB CARS, AND TRAILER CARS. THEY ARE OPERATED AS "PUSH-PULL" TRAINS AND CAN BE CONTROLLED FROM THE LOCOMOTIVE (PULL) OR FROM THE OPPOSITE END OF THE TRAIN IN THE CAB CAR (PUSH). ALL LOCOMOTIVES AND CAB CARS ON THIS LINE ARE EQUIPPED WITH AUTOMATIC TRAIN CONTROL AND CAB SIGNALS FOR USE ONLY BETWEEN HUNTER INTERLOCKING AND NEWARK ON THE CORRIDOR.

ON THE NORTH JERSEY COAST LINE, TWENTY-NINE (29) TRAINS PER DAY MOVE EASTBOUND TOWARDS NEW YORK FROM NJT RAIL CONTROLLED TERRITORY TO AMTRAK CONTROL ON THE NORTHEAST CORRIDOR AT UNION INTERLOCKING IN RAHWAY, NEW JERSEY FOR APPROXIMATELY ELEVEN (11) MILES, TO NEWARK PENN STATION AND TWENTY (20) MILES TO NEW YORK PENN STATION. OF THESE TRAINS, EIGHT (8) ARE DESTINED TO NEWARK AND TWENTY (21) ARE DESTINED TO NEW YORK. FOUR TYPES OF TRAINS ARE IN NORTH JERSEY COAST LINE SERVICE. THERE ARE SIX (6) TRAINS (EASTBOUND) WHICH ARE DIESEL LOCOMOTIVE AND CAB CAR EQUIPPED PUSH-PULL TRAINS, SEVEN (7) TRAINS WHICH ARE ELECTRIC LOCOMOTIVE AND CAB CAR EQUIPPED PUSH-PULL TRAINS, AND TWO (2) TRAINS WHICH ARE DIESEL LOCOMOTIVE HAULED WITHOUT

CAB CARS. ALL OF THESE ARE EQUIPPED WITH AUTOMATIC TRAIN CONTROL AND CAB SIGNALS.

THERE ARE FOURTEEN (14) TRAINS WHICH ARE EQUIPPED WITH ELECTRIC MULTIPLE-UNIT SELF-PROPELLED RAIL CARS. THESE ARE EQUIPPED WITH CAB SIGNALS AND AUTOMATIC TRAIN STOP BUT DO NOT NOW HAVE AUTOMATIC TRAIN CONTROL.

ON THE NORTHEAST CORRIDOR, NJT RAIL OPERATES TRAINS WHICH ARE IN AMTRAK CONTROLLED TERRITORY THROUGHOUT THEIR RUNS FROM BEGINNING TO END. ON THIS LINE, TRAINS ORIGINATE FROM TRENTON OR JERSEY AVENUE (NEW BRUNSWICK), AND ARE DESTINED PRIMARILY FOR NEW YORK PENN STATION (ALTHOUGH ONE TRAIN TERMINATES AT NEWARK). AT THIS TIME, NJT RAIL OPERATES FORTY-EIGHT (48) TRAINS EASTBOUND TOWARDS NEW YORK ON THIS LINE EACH DAY. OF THOSE, FORTY-SEVEN (47) ARE ELECTRIC MULTIPLE-UNIT SELF PROPELLED RAIL CARS EQUIPPED WITH CAB SIGNALS AUTOMATIC TRAIN STOP BUT NOT AUTOMATIC TRAIN CONTROL, AND ONE (1) IS EQUIPPED WITH DIESEL LOCOMOTIVES, AND CAB CARS IN PUSH-PULL SERVICE WITH CAB SIGNALS AND AUTOMATIC TRAIN CONTROL.

SIMILAR NUMBERS OF TRAINS ARE OPERATED ON EACH LINE IN THE WESTBOUND DIRECTION.

DRUG AND ALCOHOL TESTING

NJT RAIL HAS PROPOSED IMPLEMENTING A SET OF PROCEDURES AND RULES FOR DRUG AND ALCOHOL TESTING THAT GO BEYOND THE REQUIREMENTS OF THE FEDERAL RAILROAD ADMINISTRATION (FRA). THESE PROCEDURES ARE NOW BEING REVIEWED BY THE ATTORNEY GENERAL OF THE STATE OF NEW JERSEY TO MAKE SURE THAT THEY ARE CONSISTENT WITH STATE LAW AND POLICY ON THIS ISSUE. THE PROCEDURES COVER ALL EMPLOYEES RATHER THAN ONLY "HOURS OF SERVICE EMPLOYEES" (TRAIN CREWS, DISPATCHERS, BLOCK OPERATORS AND SIGNAL MAINTAINERS, ETC.). NJT RAIL GIVES ALL CANDIDATES FOR EMPLOYMENT PRE-EMPLOYMENT DRUG AND ALCOHOL TESTS

AND DOES NOT HIRE ANYONE WHO TESTS POSITIVELY. ALTHOUGH FRA REQUIRES THE USE OF A "BREATH-O-LYZER," NJT RAIL MANDATES A URINE TEST, ADMINISTERED BY QUALIFIED MEDICAL PERSONNEL, IN ANY EVENT WHERE THERE IS A REASONABLE CAUSE TO THINK AN EMPLOYEE IS IMPAIRED. THIS MORE COMPREHENSIVE TEST IS MORE PROFESSIONALLY CONDUCTED AND INDICATES ALCOHOL AND OTHER CONTROLLED SUBSTANCES. IN ADDITION, NJT RAIL REQUIRES THAT ANY EMPLOYEE TAKING A COMPANY SPONSORED PHYSICAL EXAM SUBMIT TO A URINE TEST FOR ALCOHOL AND OTHER CONTROLLED SUBSTANCES. NJT RAIL REQUIRES A POST-INCIDENT TEST FOR ANY INCIDENT THAT RESULTED IN A FATALITY, CAUSES THE RELEASE OF HAZARDOUS MATERIAL WHICH CAUSES EVACUATION OR FRA REPORTABLE INJURY OR RESULTS IN DAMAGES OF $500,000 OR MORE TO EQUIPMENT OR PROPERTY. FOR SUCH INCIDENTS BLOOD AND URINE SAMPLES ARE TESTED.

TESTS FOR ALCOHOL AND OTHER CONTROLLED SUBSTANCES ARE ALSO ADMINISTERED IF AN EMPLOYEE IS REASONABLY SUSPECTED OF VIOLATING RULE G. THE LANGUAGE CONTAINED IN RULE G STATES THAT EMPLOYEES REPORTING FOR DUTY, ON DUTY OR ON COMPANY PROPERTY ARE PROHIBITED FROM HAVING IN THEIR POSSESSION, USING OR BEING UNDER THE INFLUENCE OF ALCOHOLIC BEVERAGES OR INTOXICANTS. THE USE OF ANY DRUG, MEDICATION OR OTHER CONTROLLED SUBSTANCES INCLUDING PRESCRIBED MEDICATION THAT WILL IN ANY WAY ADVERSELY AFFECT THEIR ALERTNESS, COORDINATION, REACTION, RESPONSE OR SAFETY IS PROHIBITED.

EMPLOYEE ASSISTANCE PROGRAM

IN 1984, NJT RAIL INITIATED AN EMPLOYEE ASSISTANCE PROGRAM (EAP). THIS IS A VOLUNTARY, CONFIDENTIAL PROGRAM DESIGNED TO HELP EMPLOYEES RESOLVE PERSONAL PROBLEMS, PARTICULARLY THOSE INVOLVING ALCOHOL OR DRUGS WHICH ARE HAVING OR ARE LIKELY TO HAVE A NEGATIVE EFFECT ON THEIR ON-THE-JOB PERFORMANCE.

THE EAP HAS PROVEN TO BE AN EFFECTIVE ADJUNCT TO THE IMPLEMENTATION OF RULE G ON OUR PROPERTY BECAUSE IT ENABLES EMPLOYEES TO SECURE TREATMENT FOR DRUG AND ALCOHOL PROBLEMS.

CURRENTLY AN EMPLOYEE CAN AVAIL HIMSELF OF THE COUNSELING AND REFERRAL SERVICES PROVIDED UNDER OUR EAP IN ONE OF TWO WAYS: THROUGH SELF-REFERRAL, OR THROUGH SUPERVISORY REFERRAL.

UNDER SELF-REFERRAL, AN EMPLOYEE WHO RECOGNIZES THAT HE OR SHE HAS AN ALCOHOL OR DRUG PROBLEM CONFIDENTIALLY CONTACTS THE EAP COUNSELOR WHO DETERMINES THE MOST SUITABLE MODE OF TREATMENT AND REFERS THE INDIVIDUAL TO A PROVIDER OF THIS TREATMENT. MOST OFTEN THE TREATMENT IS COVERED BY THE EMPLOYEE'S HEALTH INSURANCE. THE EMPLOYEE WHO SEEKS THE ASSISTANCE OF THE EAP DOES SO WITHOUT JEOPARDIZING HIS OR HER EMPLOYMENT.

UNDER SUPERVISORY REFERRAL, A SUPERVISOR WHO OBSERVES DETERIORATING PERFORMANCE OR BEHAVIOR WHICH SUGGESTS THAT AN EMPLOYEE MAY HAVE A DRUG OR ALCOHOL PROBLEM DISCUSSES HIS OBSERVATIONS WITH THE EMPLOYEE AND RECOMMENDS THAT THE INDIVIDUAL SEEK THE HELP OF THE EAP. IT IS MADE CLEAR TO THE INDIVIDUAL AT THIS TIME THAT FAILURE TO CORRECT THIS PROBLEM IS LIKELY TO RESULT IN DISCIPLINARY ACTION WHICH MIGHT CULMINATE IN THE TERMINATION OF HIS EMPLOYMENT WITH NJT RAIL.

IN ADDITION, IN A SMALL NUMBER OF CASES, EMPLOYEES HAVE BEEN REFERRED TO THE EAP BY CO-WORKERS WHO HAVE PRESENTED EVIDENCE OF THE INDIVIDUAL'S PROBLEM TO A SUPERVISOR OR UNION OFFICIAL. UNDER THIS ARRANGEMENT, THE EMPLOYEE IS CONFRONTED WITH THIS INFORMATION AND, AS UNDER SUPERVISORY REFERRAL, ADVISED TO USE THE EAP'S SERVICES TO RESOLVE HIS PROBLEM. ALTHOUGH THE EMPLOYEE DOES NOT AUTOMATICALLY JEOPARDIZE HIS EMPLOYMENT WITH NJT RAIL BY REFUSING TO DO SO, HE IS MADE AWARE THAT HIS PERFORMANCE WILL BE CLOSELY MONITORED AND

THAT ANY SUBSEQUENT VIOLATION OF RULES OR POLICY WILL RESULT IN APPROPRIATE DISCIPLINARY ACTION BEING TAKEN.

RAIL FREIGHT CONFLICTS

THE QUESTION OF PASSENGER AND FREIGHT OPERATIONS ON THE NORTHEAST CORRIDOR IS OF SERIOUS CONCERN TO NJT RAIL. WE MUST CONSIDER THE ISSUE FROM SEVERAL DIFFERENT PERSPECTIVES INCLUDING THE SAFE OPERATION OF ALL SERVICES, THE COST OF MAINTAINING AND OPERATING THE RAILROAD, THE OVERALL ECONOMIC IMPACT OF PASSENGER, FREIGHT OPERATIONS, AND THE IMPACT OF ALTERNATIVE ROUTING ON OTHER PASSENGER LINES. THERE IS NO DOUBT IN MY VIEW THAT GIVEN ALTERNATIVE ECONOMICAL ROUTINGS FOR THROUGH FREIGHT SERVICE AND STEPS TO MITIGATE THE IMPACT ON OTHER NJT RAIL LINES, THE NORTHEAST CORRIDOR IN NEW JERSEY SHOULD BE AN EXCLUSIVE PASSENGER RAILROAD EXCEPT FOR LOCAL FREIGHT SERVICES. I FIRMLY BELIEVE THAT AS A LONG TERM GOAL THE HIGH SPEED-HIGH DENSITY LINE WOULD BE BEST OPERATED PRIMARILY AS A PASSENGER ONLY RAILROAD. I HASTEN TO UNDERSCORE THAT THIS CAN ONLY BE ACHIEVED IF SUITABLE ALTERNATIVE ROUTINGS WHICH MAINTAIN EXISTING FREIGHT SERVICES FOR NEW JERSEY'S BUSINESS ARE AVAILABLE WITHOUT ECONOMIC HARM TO THESE BUSINESSES, TO THE FREIGHT RAILROADS OR TO NEW JERSEY TRANSIT.

MY CONCLUSION ON THIS ISSUE IS BASED ON SOME VERY BASIC FACTS:

- FREIGHT OPERATIONS ARE SLOW: THE MAXIMUM SPEEDS OF FREIGHT TRAINS ON THE CORRIDOR ARE 50 MPH SLOWER THAN NJT RAIL AND AMTRAK.
- FREIGHT OPERATIONS ARE FAR MORE DIFFICULT TO CONTROL: FREIGHT TRAINS CONSIST OF MANY DIFFERENT TYPES OF CARS AND COMMODITIES AND IT IS DIFFICULT TO ACHIEVE A HIGH DEGREE OF CONTROL OVER LOADING, EQUIPMENT PERFORMANCE, AND HAZARD PREVENTION;

- FREIGHT OPERATIONS ADVERSELY AFFECT THE RIGHT-OF-WAY: THE BULK, WEIGHT AND AXLE LOADINGS OF FREIGHT CARS HAS A SIGNIFICANT IMPACT ON TRACK TOLERANCES AND OTHER ASPECTS OF THE RAILROAD ROADBED WHICH INCREASE THE EXPENSE AND DIFFICULTY OF MAINTENANCE;

- FREIGHT TRAFFIC HAS INCREASED DRAMATICALLY IN NEW JERSEY: ACCORDING TO THE FEDERAL RAILROAD ADMINISTRATION, BETWEEN 1977 AND 1983 FREIGHT TONNAGE CARRIED BETWEEN TRENTON AND NEWARK INCREASED APPROXIMATELY 300%.

ONE EXAMPLE OF A PASSENGER LINE WHICH COULD BE AFFECTED BY ALTERNATIVE ROUTING IS OUR RARITAN VALLEY LINE. IT USES A SEVEN (7) MILE STRETCH OF CONRAIL'S LEHIGH VALLEY LINE BETWEEN CRANFORD AND NEWARK TO CONNECT TO THE NORTHEAST CORRIDOR. ALTERNATIVE FREIGHT ROUTING COULD RESULT IN A SIGNIFICANT INCREASE OF CONRAIL TRAFFIC ON THIS LINE WHICH COULD ADVERSELY AFFECT RARITAN VALLEY LINE PERFORMANCE. A FEASIBLE SOLUTION, HOWEVER, COULD BE THE CONSTRUCTION AND DEDICATION OF A PASSENGER TRACK ON THIS SECTION.

I KNOW THIS ISSUE IS NOT SIMPLE, BUT WE NEED TO CONSIDER STEPS WE CAN TAKE WITHOUT BURDENING EITHER FREIGHT RAILROADS, OTHER PASSENGER LINES, OR BUSINESSES THAT DEPEND ON THEM, TO MOVE TO REDUCE FREIGHT TRAFFIC ON THE NORTHEAST CORRIDOR.

LIABILITY ISSUES

ONE IMPORTANT PUBLIC POLICY ISSUE I WOULD LIKE TO BRING TO YOUR ATTENTION IS THE DIVISION OF LIABILITY WHICH IS CURRENTLY EMBODIED IN THE CONTRACTUAL ARRANGEMENTS WHICH GOVERN NJT RAIL'S USE OF THE NORTHEAST CORRIDOR.

WITH RESPECT TO AMTRAK, NJT RAIL IS RESPONSIBLE FOR THE COSTS OF ANY DAMAGES WHICH OCCUR DUE TO ITS USE OF THE CORRIDOR, REGARDLESS OF FAULT. THIS MEANS THAT NJT RAIL IS LIABLE FOR ITS AND AMTRAK'S COSTS

FROM ANY INCIDENT INVOLVING NJT RAIL EQUIPMENT, EMPLOYEES, OR PASSENGERS. WITH RESPECT TO CONRAIL, NJT RAIL AND CONRAIL HAVE A "NO FAULT" PROVISION WHICH SIMPLY SAYS THAT IN AN INCIDENT INVOLVING CONRAIL AND NJT RAIL, REGARDLESS OF FAULT, NJT RAIL IS LIABLE FOR ANY LOSSES TO ITS EQUIPMENT, EMPLOYEES AND PASSENGERS, AND CONRAIL IS LIABLE FOR ANY LOSSES TO ITS EQUIPMENT, EMPLOYEES AND FREIGHT. THESE LIABILITY PROVISIONS ARE NOT NECESSARILY FAIR, OR "GOOD BUSINESS" DECISIONS, BUT THE RESULT OF THE POSITIONS EACH OF THE PARTIES HAVE TAKEN AND THE GOVERNING STATUTORY FRAMEWORK SURROUNDING THEIR RELATIONSHIP.

THE SITUATION IS COMPLICATED BY THE CURRENT LIABILITY INSURANCE CRISIS WHICH HAS AN IMPACT ON THE COST OF INSURANCE AND IN SOME CASES ITS AVAILABILITY. AT THE PRESENT TIME, NJT RAIL HAS A SELF-INSURED RETENTION OF $2 MILLION. OTHER RAILROADS HAVE NOT BEEN ABLE TO KEEP ADEQUATE INSURANCE COVERAGES. LACK OF SUCH PROTECTION JEOPARDIZES ALL OF THE FINANCIAL ARRANGEMENTS GOVERNING RAILROAD SERVICES ON THE NORTHEAST CORRIDOR.

IMPROVEMENTS TO THE NORTHEAST CORRIDOR

THERE IS NO DOUBT THAT THE SAFETY OF THE NORTHEAST CORRIDOR COULD BE IMPROVED BY COMPLETING THE JOB WE SET OUT TO ACCOMPLISH IN THE NORTHEAST CORRIDOR IMPROVEMENT PROJECT.

FUNDING CONSTRAINTS SIMPLY DID NOT PERMIT CERTAIN INVESTMENTS TO BRING THE CORRIDOR INFRASTRUCTURE UP TO STANDARD AND TO COMPLETE THE MODERNIZATION OF THE SIGNAL AND CONTROL SYSTEM.

SPECIFIC INVESTMENTS WHICH WE BELIEVE ARE NECESSARY TO ENHANCE SAFE OPERATIONS ON THE CORRIDOR INCLUDE:

- COMPLETION OF THE CENTRALIZED TRAFFIC CONTROL SYSTEM IN THE REMAINING GAPS THROUGHOUT THE CORRIDOR. CENTRALIZED

TRAFFIC CONTROL WILL AUTOMATE A SYSTEM WHICH HAS BEEN IN PLACE FOR 50 TO 80 YEARS, AND IN NEW JERSEY REPLACE 10 MANUAL CONTROL TOWERS WITH ONE MODERN, CENTRAL, INTEGRATED, AND AUTOMATED FACILITY;

- THE ELIMINATION OF OBSOLETE MECHANICAL MANUAL INTERLOCKINGS, AND THE RECONFIGURATION OF INTERLOCKINGS WHICH NOW CONSTRAIN CAPACITY AND RELIABILITY, INCLUDING REPLACEMENT OF LOW SPEED SWITCHES WITH HIGH SPEED SWITCHES. INTERLOCKINGS WHICH NEED WORK INCLUDE COUNTY, HUDSON, SHORE, FORD, DOCK, HUNTER, AND UNION;

- UPGRADE THE EXISTING CAB SIGNAL SYSTEM TO INCLUDE ADDITIONAL ASPECTS TO CONTROL TRAIN SPEEDS BETWEEN 60 AND 125 MPH TO INCREASE SAFE OPERATION OF HIGH SPEED MOVEMENTS;

- REHABILITATION OF BRIDGES ON WHICH SPEED RESTRICTIONS HAVE BEEN IMPOSED. THESE BRIDGES ARE SAFELY OPERATED TODAY BY REDUCING THE SPEED OF OPERATIONS BUT WORK WHICH HAS NOT BEEN FUNDED IS NECESSARY TO REMOVE THE RESTRICTIONS AND ASSURE THAT THE BRIDGES CAN PERFORM FOR MANY YEARS TO COME; AND

- REHABILITATE THE 50-60 YEARS OLD ELECTRICAL POWER GENERATION AND SUPPLY SYSTEMS BY REPLACING OBSOLETE POWER GENERATORS AND TRANSFORMERS, AND REPAIRING SUBSTATIONS AND CIRCUIT BREAKERS.

UPGRADE AND MODERNIZATION, PARTICULARLY OF BRIDGES, AND THE SIGNAL AND ELECTRIFICATION POWER SYSTEM NOW WILL ENSURE A SAFE, RELIABLE RAILROAD WELL BEYOND THE YEAR 2000.

IN ADDITION TO THE AGENDA OF IMPORTANT INVESTMENTS TO SERVE TODAY'S NORTHEAST CORRIDOR TRAFFIC, THERE ARE IMPORTANT INVESTMENTS WHICH

WE ARE CURRENTLY DESIGNING TO INCREASE THE CAPACITY OF THE NORTHEAST CORRIDOR IN THE CRITICAL AREA BETWEEN NEWARK AND NEW YORK, TO INCREASE THE ACCESSIBILITY OF THE CORRIDOR TO PASSENGERS ON ADDITIONAL NJT RAIL LINES AND TO SAFELY INCREASE THE CAPACITY OF THE ENTIRE RAILROAD SYSTEM SERVING PENN STATION NEW YORK.

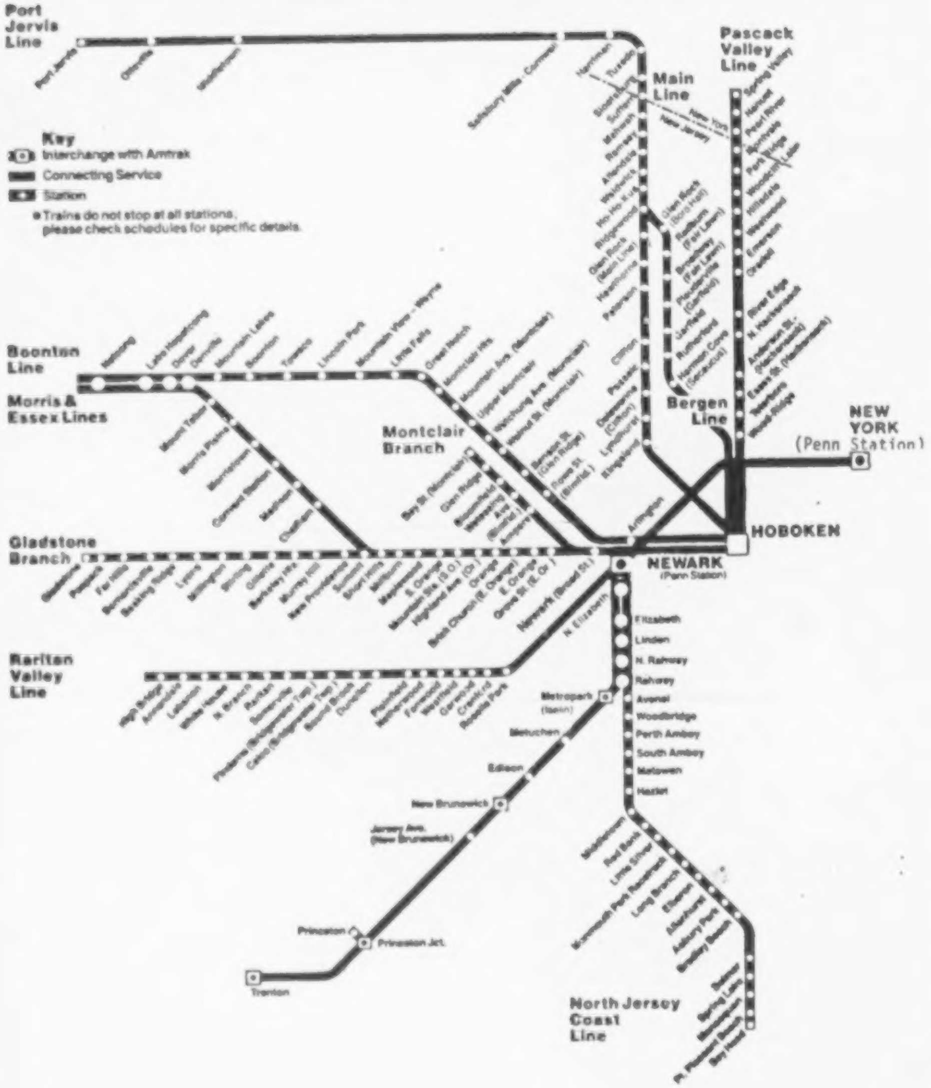
IMPACT OF ROLLER COASTER FUNDING

IT IS IMPORTANT TO POINT OUT THAT OUR ABILITY TO MAINTAIN AND IMPROVE NJT RAIL OPERATIONS IS CONTINGENT ON THE CONTINUATION OF THE FINANCIAL ASSISTANCE PROVIDED TO US BY THE URBAN MASS TRANSPORTATION ADMINISTRATION AS APPROPRIATED UNDER AUTHORITY OF THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED. WHEN WE ARE FACED WITH ROLLER COASTER OPERATING OR CAPITAL ASSISTANCE FUNDING, WE CAN NOT IMPLEMENT SOUND PLANNING AND MAKE REQUIRED INVESTMENT DECISIONS. WE WILL SPECIFICALLY COMMENT AT ANOTHER TIME ON THE FY 1988 APPROPRIATIONS BILL, BUT, FOR NOW, WE WANT TO EMPHATICALLY STATE THAT THE SAFE OPERATIONS OF OUR RAILROAD CAN BE AFFECTED BY THE HIT OR MISS PROCESS OF ANNUAL FEDERAL GRANTS. WHEN BUDGETS ARE CUT OR WHEN FUNDING IS NOT ASSURED, MANAGEMENT MUST MAKE CHOICES WHICH IN THE LONG RUN WILL AFFECT THE QUALITY OF SERVICE. WE HOPE THIS SUBCOMMITTEE CAN HELP US STABILIZE FEDERAL FUNDING AND GET ON WITH IMPROVING NJT RAIL SERVICES.

CONCLUSION

THIS COMPLETES OUR TESTIMONY. WE THANK THE CHAIRMAN AND THE SUBCOMMITTEE FOR THE OPPORTUNITY. WE WILL CONTINUE TO TAKE EVERY PRUDENT AND REASONABLE STEP TO MAINTAIN THE HIGHEST STANDARDS OF RAILROAD SAFETY.

NJ TRANSIT PASSENGER RAIL SYSTEM



STATEMENT OF ARTHUR W. JOHNSON

Mr. Chairman, Members of the Sub-Committee, my name is Arthur Johnson of Potomac, Md. I am retired from the Federal Government, and am now active as a consultant to Government and industry. I address the Committee not because of any expertise in Transportation or Appropriations, but as a grieving parent of a beautiful 20-year-old young woman who was killed in the inexcusable Amtrak/CONRAIL accident near Baltimore, Md. on January 4, 1987, while returning to Stanford University to continue her studies. I have some comments on testimony already heard, and some additional suggestions to make.

The testimony of Messrs. Riley and Claytor, Director of the Federal Railway Administration and President and Chairman of Amtrak respectively, make it abundantly clear that this accident, with its resultant loss of life, much injury, and major material damage, was completely avoidable. It resulted from the flagrant disregard of existing rules and procedures by CONRAIL employees violating public trust which caused much loss of life. Not only were warning signals inexcusably disregarded - some safety devices had even been deliberately disabled. If the crew had not done that themselves, they certainly had the responsibility to check the operating condition of equipment before departure. The public is appalled and angry that there does not seem to be existing legislation to charge the negligent parties for criminal negligence, which was, indeed, murder. Let us hope that that dangerous and deplorable situation can be corrected immediately...the safety of the public is at stake.

I will not recount the many opportunities which CONRAIL had to avoid this accident. Rather, I will concentrate on steps that could be taken, many of them quickly and inexpensively, to prevent further tragedies.Public anger and anxiety are aroused - it is a critical time to act.

I have studied in particular the specific corrective measures recommended by Mr. Claytor and another bereaved parent, Professor Roger Horn of Johns Hopkins University. It was very disturbing indeed to discover that Amtrak had also been operating in violation of its own rules on that fateful day. Even if the Amtrak violations had no causal effect upon the accident, one has to wonder about the relaxed and inattentive attitude of both management and staff when responsible for safety of the lives of the travelling public.

I would like to comment on the positive suggestions made by Mr. Claytor. These have to do with scheduling, rerouting, and safety devices. Limiting freight traffic to the night-time hours when passenger traffic is light, seems to be a relatively simple and inexpensive procedural improvement that would be easy to implement. The carriers should get together and make these changes voluntarily, if they have not already done so. If it takes legislative or regulatory action to force them to do it, then let's get on with it.

Concerning the complete separation of freight and passenger traffic onto different and never-intersecting tracks, my first impression was that this could be very expensive and time-consuming, and consequently resisted by the authorities concerned. However, Mr. Claytor shows that the separations could be made, and rather easily, in the North East Corridor. This should therefore be undertaken immediately.

Mr. Claytor describes the differences among various carriers in the North East Corridor with respect to automatic control equipment on board. There exists Automatic Speed Control and Automatic Stop Equipment which should be mandatory for all users of the tracks. It is certainly not adequate or sufficient to equip some, but not all. Resistance by management because of cost is totally unacceptable. Furthermore, regular inspection of the condition of the equipment by proper authority will be required and necessary.

Professor Horn has made six specific suggestions for your consideration, all of which I heartily endorse, and offer additional comment on some of them.

Concerning Uniform Federal Licensing, I feel that routine testing of licensees by federal authorities will unfortunately indeed be necessary, in spite of the cost, or the intrusion on constitutional rights alleged by some. After all, we are studying this problem because of the tragic and unnecessary loss of human life. Ultimately, the travelling public will bear the cost.

The suggested National Data Bank is certainly technically feasible, and management of the Bank would need to be assigned. Also, the carrier management should be required to examine the Data Bank at specified intervals to determine the suitability of their employees.

Concerning Reportable Events...these should be as all-inclusive as possible, and the required reporting parameters very clearly defined. Also, there should not only be criteria for revoking licenses as reportable events turn up, but there should also be specific requirements for renewal of licenses, as in the case of licenses for driving motor vehicles.

With respect to substance abuse, the public does indeed have a right to know about the condition of those to whom their lives are entrusted. The attitude of the CONRAIL engineer, as revealed in the press, that what "he does on his own time is his business" is valid only if the resultant period of impairment does not extend into his time on duty. Regular routine testing for drugs and alcohol, whether intrusive on individual liberty or not, is essential for all personnel operating vehicles used by the public.

I agree with Professor Horn's recommendation number 5 concerning technical improvements where he advocates installation of modern safety devices as they become available. However, it is not only necessary to install, but it is also necessary to use equipment now available and technically feasible.

Recommendation 6 addresses the responsibilities of management and labor. In this entire discussion, the need to establish rules concerning personal criminal liability is self-evident. It will also be necessary to establish some new entity to enforce, especially if it is not possible to strengthen the authority of some existing agency.

It serves no useful purpose to continue to listen to carriers blame each other, management blame labor, labor blame management, and everybody blame cost. The public demands immediate action to prevent further disastrous and unnecessary loss of life. Much of what has neen suggested can be accomplished quickly and inexpensively. It must be done. For those suggestions requiring more time and resource, we must start right now to put them into place.

Mr. Chairman, I urge your prompt actions to correct the problems related to this tragedy which come under the jurisdiction of this Committee. If I have addressed concerns that should be placed before other bodies of the Senate, I would appreciate it if they could be appropriately referred, or that I could be advised so that action parallel to yours can be encouraged.

I appreciate very much, Mr. Chairman, the opportunity to present these preliminary thoughts to you. Thank you.

LETTER FROM WAYNE W. BATES

Subject: Hearing Conducted 20 & 21 January 1987 Covering Amtrak-Conrail Collision Near Baltimore on 4 January 1987.

Dear Sir:

Reference is made to the attached letter to the General Accounting Office (GAO), Subject: "When a Safety Watchdog Withholds Appropriate Action, it is a Worse Deception than a Direct Fraud," dated 20 January 1987.

The above letter indicts the Federal Railroad Administration (FRA) for abuse of the public trust for their refusal to take action when presented with proof of improper accident reporting in violation of the Accidents Reports Act (45 USC 38/43).

Given the tragic nature of the Amtrak-Conrail collision, the above letter has topicality in documenting the scofflaw modus operandi of the Federal Railroad Administration (FRA). For that reason, this is to request that the letter be inserted in the record of the subject congressional hearing.

The letter to the GAO documents perception expressed by Senator Lautenberg (D-N.J) in a quote that appeared in the 21 January 1987 edition of the Washington Post. Senator Lautenberg was quoted as suggesting that the FRA

> "instead of being a watchdog...is a lapdog of the rail industry."

The investigative and statistical gathering practices of the FRA is in need of oversight review. Safety enforcement must be beefed-up. Failure of the FRA to exercise enforcement responsibility has come back to haunt the American public in the form of catastrophic accidents, such as occurred in San Antonio, Texas and Miamisburg, Ohio.

A word about myself. I am an Honorary Locomotive Engineer with membership within the United Transportation Union Local 103(E) of San Antonio, Texas. Local UTU-103(E) honored me with membership in recognition of my research in behalf of railroad safety.

Again, request that my research in the form of the attachment be inserted within the record of the subject hearing. Further, request support in obtaining an oversight review of the railroad safety ills that are documented by the attachment.

Sincerely yours,

Wayne W. Bates

WAYNE W. BATES
10211 Rodgers Rd.
Fairfax, Va. 22030

Inclosure

Ltr dtd 20 Jan 87 to GAO,
Indictment of the FRA

[ATTACHMENT]

20 January 1987

Subject: INDICTMENT. WHEN A SAFETY WATCHDOG WITHHOLDS APPROPRIATE ACTION, IT IS A WORSE DECEPTION THAN A DIRECT FRAUD.

Dear Sir or Madam:

I indict the FRA for abuse of the public trust for their refusal to take action when presented with proof of improper accident reporting in willful violation of the Accidents Reports Act (45 USC 38/43).

This indictment is based upon accident reports whose "CAUSE CODING" can be easily refuted by reference to investigative records in the public domain. Saying, that it takes no railroading expertise to review the charges herein. The accidents in question have been investigated and reported upon by three separate entities. Namely, the carrier, the FRA, and the NTSB. The three entities tend to contradict or agree with one another dependent upon whose ox stands to to be gored. Fortunately, the NTSB has no oxen.

Inclosure 1 presents a package of information and correspondence to provide an overview of the investigative and statistical gathering modus operandi of the FRA. The FRA is so busily engaged in harvesting accident statistics that they don't bother to separate the wheat from the chaff. The situation was summed up by an article that appeared in the 15 January 1987 edition of The Washington Times under the heading of "Railroad watchdog agency not doing its job." Erosion by inaction has channeled the FRA into an untenable position from which they make themselves look ridiculous by trying to defense the indefensible. Examples of indefensible cases are detailed within Incls. 2 through 5.

Inclosure 2 presents a package of information and correspondence pertaining to the catastrophic spill in the Medina river which occurred on 14 September 1985 near San Antonio, TX. Contending that the accident was caused by "Improperly Loaded Car," the undersigned wrote a series of letters to the FRA dated 7 January 1986, 27 March 1986, and 29 July 1986. In response, the FRA fed misleading information to the undersigned, Congressman Loeffler, and Congressman Gonzalez. The FRA mislead by saying that the "flatcar was loaded in accordance with the Association of American Railroad's Standards and Specs. for Unit Loading" in Eugene, Oregon. The FRA knows perfectly well that it makes no difference how the car was originally loaded in Eugene, Or. What counts is how the car was "re-arranged" in Strauss, NM while enroute. That bit of information was provided to the FRA from NTSB report FTW-85-FR-028, dated 22 April 1986. From the NTSB report, the carrier itself made admission that the car was not "re-arranged" in a manner that met AAR loading standards. So, it was an "Improperly Loaded Car." The scofflaw attitude of the FRA is expressed in their 9 September and 16 December 1986 letters to the undersigned where they say "evidence to support a change in the report as written, does not exist." Mind you, I just got through giving them the evidence from the NTSB report. The FRA knows that the accident reflects an improper "CAUSE CODE" in evasion of the true cause of the accident. The FRA stands firm, the CAUSE was "Shifted Load," which is like saying the NASA Challenger was destroyed by explosion, but make no effort to determine the cause of the explosion. What shifted the load is the question that has meaning insofar as remedial action is concerned. At this point, be advised that both the carrier and the FRA are in variance with recommendations made by the Association of American Railroads (AAR) in holding out for a "Single-Cause" for the accident. The AAR recommends the "Combination-Cause" concept as a means of arriving at the true cause of an accident. The need is to find the underlying cause of the accident, which included these combination-causes (1) improperly loaded car; (2) car with pre-existing defects and (3) whiplash from improperly madeup train.

Inclosure 3 presents a package of information and correspondence covering the derailment near Kelly Air Force Base, TX, which occurred on 28 February 1986. In this case, the carrier has tried to divert attention from the true cause of the accident by faulting Mother nature. In short, the carrier blamed "harmonic roll" for the cause of the accident. It won't wash when banged against NTSB Report FTW-86-FR-010, dated 26 June 1986, which documents improper makeup of the train. Its a fraud when the FRA adopts and tries to defend obvious disinformation put out by the carrier to hide carrier blame for bad makeup of the train. The NTSB did their investigative job the old fashioned way. They investigated the accident. They did not take "Exclamation and opinions" from faceless people as gospel as did the FRA, reference Paragraph 2 of FRA letter dated 30 September 1986. Paragraph 5 of this same letter exposes the "DON'T CARE" attitude of the FRA as they accept disinformation from the carrier for use in statistics:

ANYTHING GOES

> "The carrier submitted to FRA the required information,
> on the proper forms, within the specified time limits."

Inclosure 4 presents a package of information and correspondence covering the catastrophic accident in the outskirts of San Antonio, TX which occurred on 8 June 1986. This is a case where "non-doing" on the part of the FRA came back to haunt the citizens of San Antonio. The FRA track record was such that the carrier felt free to run a train in deplorable condition. Mind you, almost 40% of the cars in the train had defective conditions pre-accident. Two cars had been derailed and rerailed just two days prior to the accident. And two of the locomotives had defective conditions to include overdue inspection. And to compound the situation, the train was made up improperly with heavy loads on the rear. It was an accident looking for a place to happen. And blame can be laid at the door of the FRA for failure to exercise enforcement responsibility. In this case, the carrier has maintained a low profile. In accident reporting, they have not tried to point elsewhere in faulting Mother nature or faulting human error. What they have done is to fault NOBODY in fogging up the situation in citing Cause Code 799 "Other Miscellaneous Causes." Epidemic, there has been a rash of accidents caused by "Other Miscellaneious Causes."

This Cause Code warrants review. It may well be a dumping ground to hide management fault. Per FRA reporting instructions, its supposed to be an interim Cause Code for use until the carrier can come up with the proper cause. What does the record show. Does the FRA followup and require these carriers to update interim Cause Code 799? What happened in this case? Will Cause Code 799 be fed into the FRA Accident/Incident Bulletin?

Inclosure 5 presents a change of pace, reference is made to FRA Complaint File No. L5-SP-6068. There is no NTSB record for comparison purpose, but there is a video cassette to review the testimony of two of the eye witnesses. A fraud on the part of the FRA. The complainant documented violation of 49 CFR 229 Locomotive Standards, and signed a statement that he was willing to testify to the facts under oath. Dispite the evidence, the FRA wrote: "The FRA was unable to acquire probative information to substantiate that a violation occurred." I appeal to the GAO to look at this file and to view the video cassette as evidence of fraudulent investigative modus operandi on the part of the FRA.

One cannot leave railroading to railroaders. Beware of hypocrisy and disinformation when dealing with the railroad safety community. The profit margin is all important. Notice how the FRA discounts the dangers of improper made up trains as the cause of accidents, reference their letters to the undersigned dated 16 December 1986. Misleading statements. For instance, the Association of American Railroads (AAR) advocates "making up trains with the heaviest cars closest to the motive power" to lessen the probability of train separation. And it don't take any railroading expertise to look at the tonnage profiles for the trains described herein and know that improper makeup of the trains contributed to the accident. Besides, the NTSB report said so. And in one case the FRA said so, see Inclosure 4.

In conclusion. The question comes up, when does non-doing end and wrong-doing begin? Non-doing has pushed standards of FRA performance down so low that our safety watchdogs can't quite figure out what constitutes a safety violation even when they are standing in the midst of one. FRA non-doing is coming back to haunt the American public through catastrophic accidents such as documented herein. Non-doing in the face of wrong-doing by the carriers constitutes a fraud. Indeed, for a safety watchdog to withhold appropriate action is a worse deception than a direct fraud. Request advice as to what action is taken in regard to this indictment of the FRA.

INTRODUCTION TO GAO "HOT LINE" INCLOSURES 1 THRU 4

The Honorable Albert G. Bustamante
1116 Longworth House Office Building
Washington, D. C.

27 June 1986

Subject: ACCIDENT PATTERN HAS SURFACED - IMPROPER MAKEUP OF TRAINS

Dear Sir:

An epidemic of whiplash. The last three big accidents near San Antonio had something in common. What was the common denominator? Each of the three trains were made up improperly. No attention was paid to tonnage in makeup of the trains. To their doom, the trains went down the road playing Pop-the-Whip. Slack-in and Slack-out - Run-in and Run-out. No federal rules for tonnage distribution.

No attention was paid to tonnage distribution, which was the underlying cause of the following accidents:

1. 8 Jun 86 - catastrophic fire and spill in Salado Cr. (MP-250)
2. 28 Feb 86 - derailment of quarter mile of cars near Kelly AFB
3. 14 Sep 85 - catastrophic acid spill in the Medina River.

INCL. 4
GAO "HOT LINE"

TONNAGE PROFILE. Inclosure 1 presents the Tonnage Profile of the train involved in the 8 June 1986 accident. It is atrocious. It is an accident looking for a place to happen. Look at the profile, head-in to rear. It is a NO NO. It is an unacceptable risk to place empty cars on the head-in and a HEAVY BLOCK of cars on the rear, and then go up and down terrain at fifty miles per hour. One of two things can happen, both bad. Slack-in, can squeeze out a empty car; or Slack-out can lift an empty car off-the-rails. In this case, empty car #20 was between a rock and a hard place. It was about half-way between a block of HEAVY CARS and a block of HEAVY LOCOMOTIVES. Down and up terrain caused SLACK-IN action that squeezed the car out.

INCL. 3
GAO "HOT LINE"

SLACK-OUT LIFTED EMPTY OFF THE RAILS. Inclosure 2 consists of my letter to the FRA, dated 18 June 1986, covering the derailment near Kelly AFB on 28 February 1986. This accident was caused by improper makeup of the train, but the carrier attributes the CAUSE to some Voodoo Force called "Interaction of lateral/vertical force -rock off." The FRA gave a less exotic cause for the accident, "a broken center pin..." But first things first, improper makeup of the train caused slack action that lifted the empty tank car off the rails, where it rode the crossties for almost a mile before derailment.

INCL. 2
GAO "HOT LINE"

"SHIFTED LOAD" AGGRAVATED BY RUN-IN & RUN-OUT OF IMPROPER MADEUP TRAIN. Inclosure 3 consists of my letter, dated 4 April 1986, to the National Transportation Safety Board (NTSB) in regard to the catastrophic acid spill in the Medina River that occurred on 14 September 1985. IMPROPER MAKEUP of the train is a documented fact. And the FRA published RUN-IN & RUN-OUT train action within their report, but they left it dangling. Saying that the FRA did not address the tonnage makeup of the train in their report. And the NTSB has not yet released their investigation of the Medina River accident.

It is plain. All three trains were improperly madeup, no attention was paid to tonnage distribution. The alarming part, there are no rules or guidance governing tonnage distribution of trains. Each carrier lets their conscience be their guide. Abuses are rampart. The carriers are less than candid in reporting these type accidents. As indicated above, the carriers are quick to blame exotic forces and/or bad trainhandling to cover improper makeup of trains. And they are getting by with it.

INCL. 1
GAO "HOT LINE"

There is a gap here that needs to be plugged. It needs to be plugged on a priority basis, either by federal, state, or local regulations. As illustrated by these three accidents, the need is two-fold. There is need for oversight in Accident Reporting, where the carriers have been less than candid; and there is need for rules to govern tonnage distribution in the makeup of trains. The environment, lives and property are in jeopardy when you leave railroading to railroaders.

3 Inclosures

IMPROPER MAKEUP OF TRAINS
1. 8 Jun 86 Train Tonnage Profile
2. 18 Jun 86 Ltr to FRA (Kelly AFB Acdt)
3. 4 Apr 86 Ltr to NTSB (Medina Riv Acdt)

Sincerely yours,
Wayne W. Bates
WAYNE W. BATES
10211 Rodgers Rd.
Fairfax, Va. 22030

[INCLOSURE 1]

RAILROAD WATCHDOG AGENCY NOT DOING ITS JOB

[From The Washington Times, Thursday, Jan. 15, 1987]

No lessons will be learned. Tragedy like the Jan. 4 Amtrak accident will fade away just as previous catastrophic railroad accidents in San Antonio, Texas, and Miamisburg, Ohio, did. The ritual goes like this: surprise, shock, and wringing of hands. Then, there is much running in place to give the impression of action on the part of the Federal Railroad Administration. The FRA is saved again by public relations, self-acclaim, and the short attention span of the American public.

I do not fault the National Transportation Safety Board. Indeed, the NTSB does its job the old-fashioned way. It investigates accidents. But not the FRA. Under the guise of investigation, cases have been documented in which the FRA merely rubber-stamped disinformation from the railroad and called them accident reports.

The FRA serves as an apologist and runs interference for the railroads. This is particularly noticeable in railroad accident reporting. The FRA looks the other way when carriers prepare improper accident reports, in violation of the federal Accident Reports Act. The railroads are less than candid in reporting the "cause" of accidents. It is understandable that railroads will try to avoid cause determination that makes them liable. So the railroads evade the true cause of accidents by faulting Mother Nature or human error.

Improper accident reporting is so commonplace that a rail labor official has testified before congressional committees that "we are unaware of the FRA in its entire history ever fining a railroad for a violation of the Accident Reports Act." The FRA simply will not act on unsafe conditions and unsafe practices if it has to confront the railroads with something that will reduce the profit margin.

The FRA is not responsive to these serious but unpopular conditions: (1) heavy loads are being entrained at the rear, which causes slack-in, slack-out, whiplash action; (2) trains leave the terminal with known defective air brakes and weak or non-working back-up brakes; (3) improperly packaged radioactive material is transported through the hearts of major cities; (4) there is "almost universal confusion in the determination of maximum authorized speed on freight trains" of one major carrier.

Much wrong-doing and non-doing on the part of the FRA has been documented. For a watchdog agency to withhold appropriate action is a worse deception than a direct fraud.

WAYNE W. BATES
Fairfax, Va.

[INCLOSURE 2]

SUMMARY OF MATERIAL IN GAO "HOT LINE" INCLOSURE 2

CATASTROPHIC SPILL IN THE MEDINA RIVER ON 14 SEPTEMBER 1985
SOUTHERN PACIFIC ACCIDENT NEAR SAN ANTONIO - REPORT U-5725 DATED 24 OCT 1985

84 LOADS 28 EMPTYS - 7542 TONS -7860 FT LONG (APPROX. 1.5 MILES) - NO CABOOSE

SINGLE-CAUSE DETERMINATION

CARRIER & FRA LISTED CAUSE CODE 704 "LOAD SHIFTED"

COMBINATION-CAUSAL FACTORS IN DETERMINING WHAT "SHIFTED THE LOAD"

(1) IMPROPERLY LOADED; (2) PRE-EXISTING CAR DEFECTS; (3) IMPROPER TRAIN MAKEUP

DOCUMENTATION

1 IMPROPERLY LOADED CAR PER CARRIER MSG DTD 15 SEP 85, ONE DAY AFTER ACCIDENT.

"THERE WAS NO WAY THE (SINGLE) CARMAN COULD REINSERT THE BEARING PIECES UNDER THE LOAD (WHILE CAR #3 WAS IN SIDING AT STRAUSS, NM ON 12 SEP 1985)."

2 PRE-EXISTING CAR DEFECTS PER FED. RAILROAD ADMIN. (FRA) REPORT DTD 8 OCT 85.

A. "WAS EVIDENCE OF MOVEMENT OF THE LADING, KNOWN TO THE MEMBERS OF THE TRAINCREW. THERE WAS A HISTORY OF SHIFTED LADING AND REPAIRS TO BLOCKING"

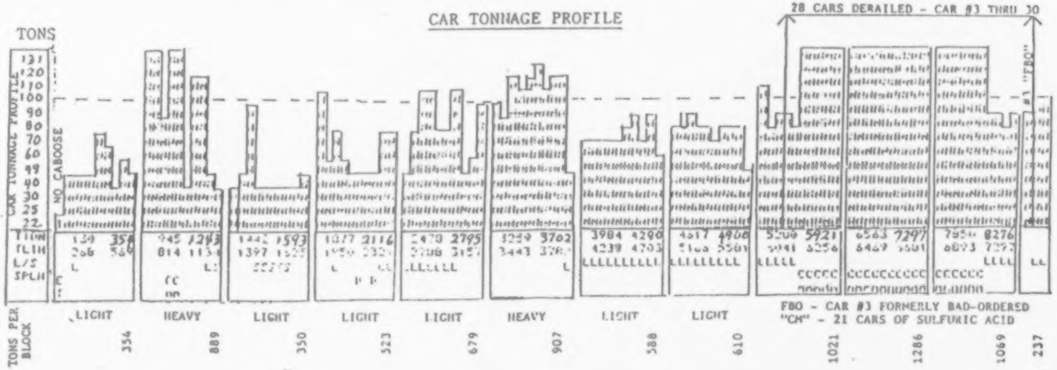
B. "THERE WAS ONE-INCH CRACK IN THE RIM OF THE BOWL ON THE AR SIDE OF THE "A" END TRUCK BOLSTER CENTER PLATE."

C. "THERE WAS A CRACK IN THE COUPLER YOKE POCKET OF THE "B" END OF THE CAR."

3. IMPROPER DISTR.OF TONNAGE IN MAKE-UP OF THE TRAIN (HEAVY CARS ON THE REAR)

PAGE 4 OF NTSB REPORT DTD 18 APR 86: "REVIEW OF PULSE EVENT RECORDER TAPE REVEALS THAT HARSH TRAIN SLACK ACTION OCCURRED AS FOLLOWS (7 LOCATIONS).

CAR TONNAGE PROFILE



THE CULPRIT - CAR #3
28 CARS DERAILED - CAR #3 THRU 30

FBO - CAR #3 FORMERLY BAD-ORDERED
"CM" - 21 CARS OF SULFURIC ACID

[INCLOSURE 3]

SUMMARY OF MATERIAL IN GAO "HOT LINE" INCLOSURE 3

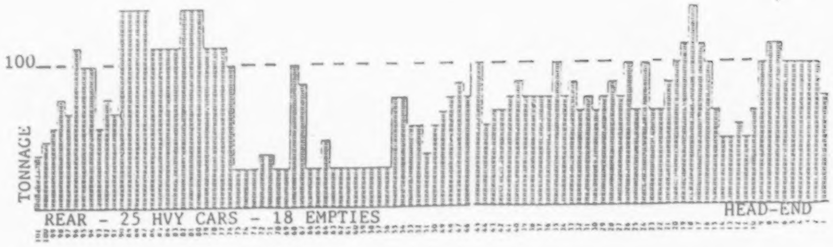
CAR TONNAGE PROFILE
TRAIN EXTRA 7257 EAST, 1LAMFT 25
SOUTHERN PACIFIC ACCIDENT REPORT NO. U0886
17 CAR DERAILMENT NEAR KELLY AFB, TX ON 28 FEB 1986
83 LOADS & 18 EMPTIES - 7813 TONS - 1.4 MILE LENGTH - NO CABOOSE - 4 ENGINES

CONTRADICTION
CAUSE DETERMINATION - MULTIPLE CHOICE

1. SOUTHERN PACIFIC (SP) REPORT DATED 20 MAR 86
"INTERACTION OF LATERAL/VERTICAL FORCE-ROCK OFF. ONE CAR (#65) DERAILED AT MP 219 WHEN IT HIT SWITCH AT WITHERS GENERAL PILE UP OCCURRED."

2. FED. RAILROAD ADMIN. (FRA) REPORT 4 MAR 86
"THE DERAILMENT OCCURRED BECAUSE OF A BROKEN CENTER PIN WHICH ALLOWED THIS CAR (#65) TO SHIFT OFF ITS CENTER PLATE."

3. NAT'L TRAN. SAFETY BD (NTSB) REPORT DATED 26 JUN 86
"THIS TRAIN MASS MAKE UP DOES NOT CONFORM TO AAR (ASSN. OF AMERICAN RAILROADS) TRACK/TRAIN DYNAMICS TRAIN MASS MAKEUP RECOMMENDATIONS." (BUFF FORCE POP OFF)



[INCLOSURE 4]

FRA REPORT 106-86 "PROBABLE CAUSE OF ACCIDENT"

C. PROBABLE CAUSE OF ACCIDENT

The probable cause of the accident involved several factors including:

1. Initial Derailment:
   a. Train makeup of consist.
   b. Train handling.
   c. Speed of train in undulating territory.
   d. Mechanical defects on cars in consist.

2. General Derailment:
   a. Train air brake line was broken during the initial derailment, which caused an emergency application of the train brakes, increasing the severity of the accident.

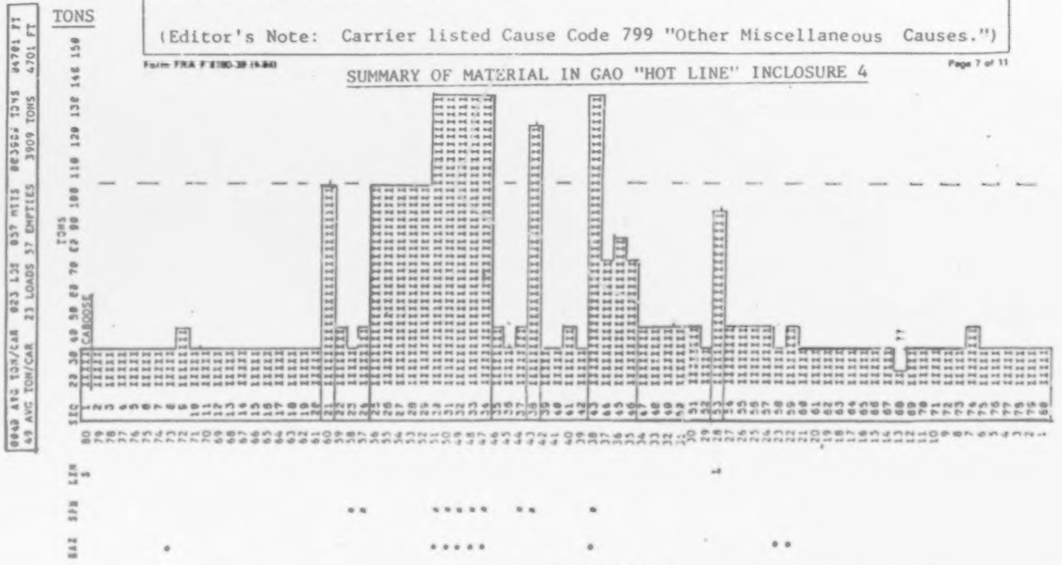
A causal factor contributing to the accident was the inadequate inspection of the train at SOSAN (South San Antonio) Yard.

(Editor's Note: Carrier listed Cause Code 799 "Other Miscellaneous Causes.")

Form FRA F 6180-39 (4-84)

Page 7 of 11

SUMMARY OF MATERIAL IN GAO "HOT LINE" INCLOSURE 4



TONNAGE PROFILE

UNION PACIFIC TRAIN INVOLVED IN ACCIDENT NEAR SAN ANTONIO ON 8 JUNE 1986

[INCLOSURE 5]

SUMMARY
INCLOSURE 5 MATERIAL
FRA COMPLAINT FILE L5-SP-6068

Mr. J. R. Snyder
National Legislative Director
United Transportation Union
400 First St, N. W. Suite 704
Washington, D. C. 20001

6 February 1986

Subject: Violation of 49 CFR 229 Locomotive Safety Standards by the Southern Pacific on 13 January 1985 at Del Rio, Texas (FRA File L5-SP-6068)

Dear Sir:

Reference is made to your 25 September 1985 letter to the Federal Railroad Administration (FRA) in regard to the subject file. And reference is made to the FRA response to you dated 16 December 1985, where the FRA concluded by saying:

> "The FRA was unable to acquire probative information to substantiate that a violation occurred."

In brief, this was a case where the complainant reported burnt-out brake shoes on engines that had not been inspected per regulations. The carrier was in violation of CFR 229 Sections 229.7 (Prohibited Acts); 229.9 (Movement of Non-Complying Locomotives); and 229.21 (Daily Inspections).

Neither the FRA response to you nor the FRA response to me ring true in this matter. For ready reference, I have attached my reclama to the FRA in a letter, dated 2 February 1985, which takes the form of a FREEDOM OF INFORMATION ACT (FOIA) APPEAL. Saying that if the FRA has indeed "interviewed, reviewed, and examined" everything, evidence of such "thorough investigation" has been withheld from me, which prompts the FREEDOM OF INFORMATION ACT (FOIA) APPEAL.

Credibility suffers. The FRA claimed that they were "unable to acquire probative information to substantiate that a violation occurred."

"PROBATIVE INFORMATION"

1. The witness was and is willing to testify under oath as to the condition of the brakeshoes, and he said so within the body of his complaint which was signed by both he and the FRA Inspector.

2. In writing, the carrier goes along with the spent brake shoes in letter to Mr. L. S. Young (UTU), File E-80 A-85 dated 11 June 1985, signed by R. F. Guidry. The carrier wrote to UTU in paragraph 2:

> "(Complainant) proceeded to check the brakes, finding that some of the brake shoes were completely spent, not touching the wheel. This condition was reported to the Trainmaster and Dispatcher who advised that Trainmaster Clark would be dispatched to check the brakes."

To ignore conclusive evidence of safety violations is to maintain Texas as the perennial worst case in three categories, worst case in railroad accidents, fatalities, and hazardous material spills.

The complainant is not satisfied with the FRA investigation. As he said, "Employees that dare step forward (to report) safety violations deserve a timely and creditable investigation of their case for harrassment is sure to dog their footsteps."

Therefore, the complainant takes this means to request that action be taken to obtain a creditable and auditable investigation of the case.

Sincerely yours,
Wayne W. Bates
WAYNE W. BATES
10211 Rodgers Rd.
Fairfax, Va. 22030

Inclosure
2 Feb 86 ltr to FRA (FOIA Appeal)
with Locomotive Inspection Record
Documenting Violation 49 CFR 229.21

And Other Background Papers

RLEA SEEKS REGULATION UPGRADE

[From Labor, November, 5, 1986]

The Railway Labor Executives Association has called on the federal Department of Transportation to implement 10 improvements in the regulations governing rail transportation of hazardous materials.

In a petition filed with the materials transportation bureau in the DOT's Research and Special Programs Administration, RLEA Safety Committee Chairman James R. Snyder pointed out that the need for changes in these regulations has been "highlighted" by a number of recent accidents involving the transportation of hazardous materials by railroad.

Saying the RLEA requests an oral hearing on its petition, Snyder stated the first regulatory change being sought by rail labor is the imposition of minimum training standards for handling accidents involving toxic chemicals. These standards should cover all railroad workers and state and local emergency response personnel, he said.

"Officials find it difficult and sometimes impossible to acquire the basic information on hazardous materials production and transportation that is needed to plan and prepare for emergencies," Snyder declared. And he pointed out that the Office of Technology Assessment has found that fewer than 25% of all emergency response personnel are adequately trained to handle accidents involving toxic chemicals.

He added that a recent Miamisburg, Ohio accident "illustrates the need to have the spacing of hazardous materials cars better defined." A carload of high explosives should not be placed next to a car carrying propane or caustic acid, he said, "and all hazardous materials cars should be separated by idlers or other rail cars."

Snyder then pointed to three catastrophic accidents in the San Antonio, Texas, area which he said "reveal a highly suspect pattern in train profiles and shifted loads. The tonnage profile of [one] train involved in those accidents showed heavy blocks of cars placed near the rear. These heavy blocks caused cars to run in and out resulting in ramming and jerking forces on the immediate preceding and trailing cars. The results are shifted loads or damaged cars causing derailments."

Snyder called for a nationwide rule concerning weight distribution in long trains.

His arguments on this issue were reinforced by a report on a Southern Pacific Railroad derailment at San Antonio by railroad safety investigator T. W. Toal who pointed to problems with train's consist and declared, "This train mass makeup does not conform to [Association of American Railroads] track/train dynamics train mass makeup recommendations."

Other RLEA recommendations:

✓ Railroads should be required to furnish engineers and conductors with tonnage profiles and with a list of cars and their contents as they are positioned in a train.

✓ Railroad cars carrying liquids should have appropriate baffles inserted.

✓ Tank cars carrying one particular hazardous commodity should have a standard color coding to overcome problems in many accidents where car numbers and placard information are often not visible.

✓ Employees required to inspect hazardous materials cars as a result of suspected leakage or other problems should be required to wear protective clothing and gas masks.

✓ All 105 and 111 type tank cars should be fitted with head shields, shelf couplers and thermal insulation.

✓ After a certain number of years in service, tank cars should not be used on the railroads.

✓ The FRA should be required to inspect tank cars while they are being manufactured to assure that the manufacturer complies with DOT standards. Such inspections now are conducted only by the AAR.

On this issue, Snyder said: "The Dec. 31, 1984, ethylene oxide release at North Little Rock, Ark., highlights this problem. After that hazardous materials release, it was discovered that since 1971 the manufacturer of the involved tank car had been installing anti-shift brackets improperly."

RULES NEEDED

No attention is being paid to distribution of tonnage in the makeup of trains. Heavy loads are being entrained on the rear. Improper makeup of trains was the common denominator within the last three big accidents that ocurred near San Antonio, Texas:

1. 14 Sep 1985 - Catastrophic acid spill in the Medina River.
2. 28 Feb 1986 - Major derailment ($431 K Damages) near Kelly AFB, TX
3. 8 JUN 1986 - Catastrophic fire and spill in Salado Creek

Letter From George Webster II, Owner-Manager-Founder, George Webster Electric

January 19, 1987

Re: AMTRAK-Conrail Train Crash, Sunday, January 4, 1987, 1:33 P.M
Chase, Maryland, with 16 fatalities, 170 injured and millions in
damages--"Worst in 15 years"

Dear Senator:

I respectfully suggest the following to make the N.E. Rail Corridor safer for humans:

1. Immediately order all Conrail freight and locomotive operations confined to midnight to 5:00 A.M., where their locomotives cross or use AMTRAK rails.

2. Immediately order Conrail to buy a large number of spare two-way radios for all their locomotives and repair all the broken ones. One lawsuit could pay for 500 new two-way radios. The spares should be at every depot, not all in Philadelphia, and available seven days and nights for change-out.

3. Retain N.E. Corridor DeLeuw-Cather Consulting Engineers to price out a bridge(s) or tunnel(s) for Conrail to cross over/under AMTRAK high-speed Metroliner corridor at all hours. Then authorize same.

4. Immediately replace all the irritating Conrail whistle-alarms with pleasing chimes, cycling bells (3 sec. on, 3 sec. off), plus talking message chips that private enterprises Coca-Cola and Toyota cars already have.

5. Authorize automatic tripper braking on all Conrail locomotives whenever they run through a stop signal and have telemetry-radio signal to all pusher-helper locomotives on the rear end of long, heavy freights so they brake at same instant as head end pulling locomotives and status message-voice alarms in all locos, "automatic stop."

6. The Shinkansen (Japan Bullet train) has carried 10 million passengers without one death. They never allow freight locomotive or freight cars on their tracks.

7. Keep in mind that one copilot and one pilot can fly only 350 passengers at once. Whereas, an AMTRAK engineer has 1,050-person capacity in his train--triple the lives.

Patriotically yours,

George Webster

George Webster II
Owner-Manager-Founder
George Webster Electric
a private enterprise with
no subsidies, federal or state.

Letter From Walter Skretch

January 22, 1987

Senate Appropriations Sub-Committee on Transportation
156 Dirksen Office Building
Washington, DC 20510

Dear Sirs:

As an injured party of the Amtrak Colonial train accident of 1/4/87, I watched the recent hearings with keen interest. I was appalled on one hand as the numerous negligence factors became more and more apparent; on the other hand, I was gratified to see and hear that there was great concern on the part of the sub-committee members and of those who testified. I do hope that lessons learned will lead to positive steps to better protect the public in all areas of public transportation.

I did not, however, see any evidence brought forward relating to the possible negligence factor involving the engineer of the Amtrak train, who was allegedly to have been operating the train in violation of the speed limit at that point, and which could have been a contributing factor in the severity of the accident.

I would appreciate any information you might have regarding this aspect of the disaster.

I do appreciate your efforts on behalf of the safety and welfare of the general public.

Very truly yours,

Walter Skretch

Walter Skretch
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